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DEPARTMENT OF AGRICULTURE

Program Plans for the 1975-77 Policy Cycle

August 1, 1974

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PROGRAM PLANS FOR THE 1975-77 POLICY CYCLE.

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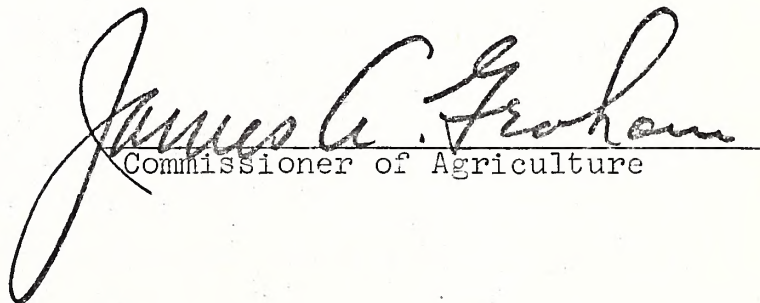

Commissioner of Agriculture

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ADMINISTRATION PROGRAM (BUDGET PAGES F-6, 7, 8, 9)

I. PROGRAM DEFINITION

Purpose

To direct, supervise, and lend staff support to the agricultural and consumer protection activities of the Department of Agriculture. This program includes the Commissioner's office, his Assistants, the Administrative Services Division, and the Publications staff.

Means and Methods Used to Achieve the Purpose

1. Development of policies, guidelines, etc., for the direction of the Department.
2. Coordination of program activities for the best interests of the State.
3. Budgetary preparation and control including the collection of receipts for our self-supporting programs and coordination of Federal funds allocated to this Department.
4. Assistance in administrative planning and program development.
5. Personnel management, employee development, and training.
6. Procurement of supplies, equipment, and materials necessary for the operation of this department.
7. Preparation and dissemination of pertinent agricultural and consumer information. This is accomplished through news media releases, the Agricultural Review, and various other publications.
8. Administration of employee centered services such as Workmen's Compensation, safety, insurance, service awards, internship programs, etc.

History and Statutory Authority

The Department of Agriculture was established in 1877 by Article III, Paragraph 17 of the State Constitution. Subsequent authority for this Department is covered by Chapter 106 of the General Statutes of North Carolina.



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II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Need for renovation of the Agriculture Building. The original part of the Agriculture Building was completed around 1924. The building in its present state is in desperate need of an overall renovation in order to bring it up to the standards of the other State buildings in the Capitol Complex. The renovation is also required in order for our building to meet the requirements set forth by O.S.H.A. The outer shell of the building seems to be basically sound; however, the interior needs complete renovation as far as electrical, plumbing, and overall appearance is concerned.

Within the past several weeks we have had numerous electrical blackouts due to our building not being properly wired for electrical service. Fans and an air conditioner have been placed in the electrical service room to try to keep the electrical service panels from overheating. This in itself presents a fire hazard. Due to the underpowering of the building, numerous items of equipment are plugged into receptacles that should only handle two items of equipment. During the past years wires have been extended throughout the building along walls, through halls, etc.

Due to the analytical laboratories being located on the top floor, the plumbing has been eroded during the years due to acids being poured down the drains. We have had numerous occasions when spills occurred and ran through the ceilings of offices onto the floors below. All of the plumbing should be reworked during renovation to insure tight fittings in order to prevent health hazards.

The interior needs to be completely remodeled in order for us to have a building the people of the State can be proud of, instead of one that the employees have to make excuses for when visitors come in and see the decrepit appearance. Outdated lighting and air conditioning systems still prevail throughout the building. Exposed wiring and pipes are seen throughout hallways and some of the offices. It is further planned that renovation will result in better space utilization and help relieve the crowded office situation.

A recent survey of the O.S.H.A. program pointed out numerous areas needing improvement in order

for us to meet the standards set forth by this program. Our stairways need additional rails, the electrical service outlets are overcrowded, exposed wiring presents tripping hazards, the fire escape does not appear to be safe if used by a number of people, and there is no emergency alarm system in the building to warn employees, to name a few of the violations.

Response: We have requested that the State Property Control and Construction Division make an estimate of the cost of renovation and that they include this in their budget for 1975-77. It is anticipated the Analytical Laboratory Building will be completed during late 1976 and renovations could begin at that time since the laboratory on the fifth floor will be moved on completion of the new building. The actual monetary request to meet this need will appear in the plan of work for the Department of Administration.

- b. Problem: Storage space for the Agriculture Building. The N.C.D.A. presently has an acute storage space problem. Rooms that were used for storage space in the past are now being renovated for use as office space due to program expansions. In addition, we are now having to buy larger volumes of stock in order to have an adequate supply on hand to maintain our programs. Storage space in other State owned buildings is no longer available to us since the other State Agencies are having the same problem.

The main factor that prevents us from using a central state owned warehouse is that we have volatile chemicals that must be stored in areas that are fireproof and explosive-proof.

Response: A current survey of our storage area requirements indicates the need for approximately 5,000 square feet of space. The building could be constructed on Department of Agriculture owned land in the vicinity of the State Fairgrounds.

- c. Problems/Trends: Need for decentralization of program services. As the complexity of agriculture has increased, there has been a corresponding increase in the Department's services to meet these needs. Historically, regulatory employees of the Department have worked in districts away from Raleigh with no office services, poor communications, and with supervision supplied directly from the Raleigh Office. Some service personnel have been stationed away from Raleigh and have experienced the same operational difficulties. Although there are disadvantages in employee decentralization, the lack of local offices has increasingly become a detriment to our programs as we strive to respond quickly and accurately to the needs of the public.

In order to get specific assistance with a problem, the public must call Raleigh and register a complaint or request for service. The Raleigh Office in turn must communicate the need to the employee. Field personnel can normally be reached only at night, causing at least a one day delay in response time. Many times these delays result in lack of ability to adequately control law and regulation violations. The general public often becomes frustrated when they realize that they are calling Raleigh to solve a problem that must actually be solved in the same location where the request originates. People in the areas of the state away from Raleigh do not feel that they get the same service as those near Raleigh.

A decided degree of professionalism is also lost when the employee must write cease and desist orders by hand on other regulatory documents or wait until a letter can go to Raleigh for typing to be mailed later to the violator.

Response: An administrative decision has been made to decentralize departmental programs, providing better communication between field personnel, the Raleigh Office, and the general public. Communication will be maintained through district offices with the field personnel in order to provide rapid response to citizens' needs. Secretarial services will be provided to field personnel through these district offices.

Area offices will be developed in localities to the extent that the public can be rapidly and economically served. Office locations likely

will include Asheville, Charlotte, Winston-Salem, Wilmington, Kinston, and Edenton. Initially, an eastern office and a western office will be established in development of a complete complement of area offices to better serve the state.

Area office locations will be considered in the future as location sites for program supervisory personnel who need to be located away from the Raleigh Office.

- d. Problem: Inadequate boardroom facilities. The boardroom, located on the third floor of the Agriculture Building Annex, has had no redecoration or improvements since the completion of the building in the early fifties. The furniture has become worn and should be replaced. In addition, the design of the facility does not provide suitable acoustics, making it impossible to conduct hearings or board meetings in a professional manner. Many times persons seated near the rear of the room are able to hear only a limited portion of the proceedings. Due to its size, the boardroom is used frequently by other State agencies for seminars, examinations, etc., as well as for meetings of the Board of Agriculture and hearings.

Response: New furniture should be purchased to make the facility more comfortable and conducive to long exhausting meetings. To correct the acoustical problem, a sound system should be installed to provide an adequate sound level to all parts of the room. In addition, a portion of the room should be elevated approximately one foot to provide the audience with a better view of speakers.

- e. Problem: Inadequate publicity of departmental programs. In drawing plans for the various programs in the department, the need for additional manpower in the dissemination of agricultural and consumer information was presented.

As a result, the administration has reallocated one position to the Publications Division as an Information and Communications Specialist.

This position is vital to the changing needs of the state to provide informational services on programs of the department and represents realization by administration that the problem exists and can be met from existing resources.

In addition to this, however, there is a need for supportive secretarial assistance and audio-visual equipment to truly maximize our efforts. While technical personnel are essential, their efforts can be most effective only with the necessary supportive assistance.

Response: To hire a Stenographer II and to expand audio-visuals by consolidation of present equipment and purchase of additional needs. This should be done in the next year and will benefit the progress of the program over the next five years.

- f. Problem: Funding of programs on a fee basis. The purpose of the Department's regulatory programs is to protect the consumer from misrepresentation of quantity, quality, or services in agricultural and related fields. Originally, many of the programs were financed through collected fees. At the present time, program financing is achieved by one of three methods: fees collected, appropriated funds, or a combination of the two.

Many of the Southeastern states have either initially or in recent years moved their consumer oriented programs in the direction of general fund financing. This system reduces overhead expenses of audit and receipts control and tends to put all agricultural production segments on an equal basis. Although certain inspection fees charged in North Carolina may be small on a unit basis, they do tend to establish a competitive disadvantage with other states in which such fees do not affect the cost of production. This factor has become increasingly important during the past year, as economic difficulties have caused meat and poultry producers to go bankrupt.

There is strong sentiment among the producers of agricultural commodities that they are no more responsible for financing programs protecting the use of their commodities, than are loan agencies for payment of fees to the Department of Justice to insure the fair treatment of citizens who borrow money. It is felt that general funding of regulatory programs would allow citizens to share costs at the initial stages rather than as an increase in food costs, inherent in fee basis funding.

Response: Seek general funds to support regulatory programs concerning the use of agricultural commodities, namely feed, seed, and fertilizer. With the fertilizer program, a portion of the tonnage fees would remain for use in direct support of the soil testing program which is a service to the fertilizer industry through the public user of fertilizer.

III. PLAN FOR THE 1975-77 BIENNIUM

Analysis of Major Changes Proposed

a. Storage

We plan to request funds during the 1975-77 biennium for the purpose of constructing a warehouse facility on land owned by the Department of Agriculture, located in the vicinity of the North Carolina State Fairgrounds. The facility will be of the pre-engineered metal construction type, containing approximately 5,000 square feet. The facility will also contain fire and explosive proof storage volatile chemicals. Security for this building could be provided for by the security guards at the State Fairgrounds. An estimated cost for this facility is \$75,000. Constructing such a facility will relieve crowded conditions in the Agriculture Building and provide safer, more organized storage space. There is no alternative except to continue our unsafe and overcrowded basement storage.

b. Decentralization

Most department regulatory personnel and several service personnel have historically been located at points away from the Raleigh area. This has been the policy in order that travel time and

cost reduction be gained. As the citizens of the state have become more consumer conscious, and the farm population has demanded greater services, problems have arisen in response time and efficiency of operation.

The field personnel have basically operated from their homes which has made it impossible to reach these people during the day with regularity. Itineraries have been kept at the Raleigh office, but often daily changes are necessary, making rapid contact difficult as well as costly since several phone calls are needed to locate an individual. By not having office services available, field personnel have not been able to have letters typed without sending them to Raleigh. This situation has caused these employees to lack a certain degree of professionalism that would make program implementation more effective. Cease orders and similar documents need rapid implementation with a high degree of professionalism.

As a result of the present field personnel having no local office contact, the citizens are inconvenienced by not receiving the most rapid response to problems. By having to call Raleigh from all parts of the state to report suspected law and regulation violations, the response time is often in excess of twenty-four hours. Often this time lapse causes difficulties in enforcement. Where service programs are involved, time may not be as essential, but local offices could better determine the needs of the citizens throughout the state and refer their requests rapidly to the appropriate persons.

During the 1975-76 biennium, area NCDA offices will be developed - one in the east and one in the west. Each office will be staffed by one secretary who will receive incoming requests and complaints and relay them to the field personnel in the office area. This person will serve in a liaison role between the citizens, field personnel, and the Raleigh office. A rapid communication system will be developed for communicating with strategic regulatory personnel including car radio contact between the area office and field personnel where necessary.

The two original area offices will provide secretarial services to all field personnel operating in these areas and will serve as a base of operations for the employees living in the areas. These offices will also serve as supervision points for our area personnel.

It is estimated that the cost of these offices for personnel, equipment, supplies, and rental space (1,000 square feet each) will be \$23,556.80 and \$10,000.00 for communications equipment.

c. Redecoration of Boardroom

During the first year of the 1975-77 biennium, we propose to redecorate the boardroom and make minor renovations to provide a more up-to-date and useful facility. The redecorating will consist of painting and new furniture and fixtures. Renovations will include the construction of a platform approximately 18' x 22.5' to raise the program area one foot above the audience level. The platform should be covered with carpet. We further propose to purchase a sound system with sixteen microphones and the necessary speakers. An amplifier is already located in the boardroom and should serve adequately. The benefits that will be derived by modernizing the boardroom will be greater comfort, efficiency and professionalism in the meetings conducted there. The projected cost of this project is approximately \$6,000 and will require budgetary approval for implementation.

d. Publication Secretary

There is a need for one additional Stenographer II to aid the Publication Division in their dissemination of agricultural and consumer information. This position is vital to the changing needs of the state in order to provide informational services on programs of the Department. The Publications staff serves the entire Department and due to the increased workload imposed by the addition of a consumer information specialist it will be necessary to expand our clerical support.

Cost

| | | |
|--------------------------|----------------|----------------|
| Salary (Stenographer II) | <u>1975-76</u> | <u>1976-77</u> |
| | \$8050 | \$8970 |

This addition will increase the effectiveness of the publication staff and free the specialists from doing much of the routine functions of an information office. No alternative seems feasible.

e. Audio-Visual Equipment

The activity of the Department has become so complex and diversified that there is a need to provide a central source of audio-visual equipment. This could be handled by consolidating all such equipment now in the Department into the Publications Division and acquiring new equipment as needed to meet the increased needs of this Department.

The benefits of this arrangement would be more efficient use of existing equipment and the availability of more sophisticated equipment that could not be justified under existing procedures.

COST

| | <u>1975-76</u> | <u>1976-77</u> |
|-------------------------------------|-------------------|-------------------|
| Synchronized slide projector system | \$890.00 | |
| 1 - 16mm Movie Projector | 359.00 | \$359.00 |
| 1 - carrousel 35mm slide projector | 61.40 | 61.40 |
| 1 - overhead projector | 178.49 | 178.49 |
| Portable public address system | 219.95 | |
| Bull horn PA speaker | | 149.95 |
| 1 - cassette tape recorder | 62.40 | 62.40 |
| Copy stand and baseboard | 33.70 | |
| 70 x 70 projection screen | 73.95 | 73.95 |
| 2 - 35mm cameras | 190.00 | 190.00 |
| | <u>\$2,068.89</u> | <u>\$1,072.19</u> |

There would be no legislative action required except approval of the budget for the new equipment. This program would have the effect of boosting many programs in the Department at no cost to these programs.

An alternate solution would be to maintain the present system whereby each division maintains its own audio-visual equipment, purchasing new units that would be used infrequently at a much higher cost in total dollars and less effective programs.

f. General Funding of Regulatory Programs

A number of the regulatory services of the Department have been financed by fees collected from certain segments of the agricultural industry. Since the rise in consumer awareness, some of our competing states have switched their source of financing of regulatory programs to general funds. It appears more equitable for the general public to share in the cost of regulatory work with agricultural commodities than to have this cost passed on in increased food costs. At the present, some commodities are subject to fees while others are not. This develops inequity both among commodities as well as among states. The benefits of changing the method of financing the Feed, Seed, and Fertilizer regulatory programs would be equality among these segments of the agricultural industry. The change would decrease audit and bookkeeping requirements of the Department and decrease the program overhead. It is not proposed that the portion of the fertilizer tonnage fees that is used to support the soil testing program be changed. There would be necessary legislative changes in altering the funding system from fees to general funds. These changes in Feed, Seed, and Fertilizer program funding will require general fund appropriations in the amount of \$699,370 each year of the 1975-77 biennium less the cost of 1 auditor and one secretarial position.

The alternative to making this change is to maintain the Departmental funding procedure with fees, general fund revenue, and a combination of the two for implementing regulatory programs with agricultural products. This would leave certain segments of the agricultural industry which are now, and will likely continue to be, at an economic disadvantage with many other industries in North Carolina regulated by the state.

| | |
|----------------|------------------|
| Fertilizer tax | \$372,270 |
| Feed tax | 289,100 |
| * Seed tax | 38,000 |
| Total | <u>\$699,370</u> |

*Based on the continued licensing of Seed Dealers

The above total should be reduced by the cost of our two auditors and their secretary.

MARKETS ADMINISTRATION SUBPROGRAM (BUDGET PAGE F-11)I. PROGRAM DEFINITIONPurpose

This program supervises and coordinates all marketing related activities, including service and regulatory responsibilities which are part of the following programs: Horticultural Crops, Field Crops, Poultry, Livestock, and Special Services.

Means and Methods Used to Achieve the Purpose

1. Keep abreast of agricultural conditions on the state, national and international levels to determine in advance, where possible, those circumstances that could adversely affect the marketing of North Carolina farm products.
2. Maintain close contact with producer groups, farm organizations, allied interests and consumer groups as a means of determining needs in both service and regulatory areas.
3. Analyze programs of work carried on by the Division to determine their effectiveness and alter them as needed to bring about more efficiency.
4. Anticipate resource needs for Division programs and seek these through standard budgetary methods.
5. Provide leadership and direction to personnel at the supervisory level.
6. Keep the general public informed of market conditions and of trends or changes that could materially affect their particular situations.

History and Statutory Authority

The Division of Markets was established in 1923 by the Commissioner of Agriculture.

POULTRY SUBPROGRAM (BUDGET PAGE F-12)I. PROGRAM DEFINITIONPurpose

To provide assistance to the state's poultry industry and the people of the state by improving and maintaining poultry product quality and processing efficiency, thus enhancing marketability and consumer confidence in accurately labeled quality poultry products.

Means and Methods Used to Achieve the Purpose

1. Producers and processors are assisted with equipment selection and procurement, with learning grade standards and grading procedures, and with obtaining markets for their products.
2. Processors are assisted with plant layouts to obtain maximum efficiency of operation and with problems affecting product quality.
3. Feasibility studies are conducted for new processing facilities and for significant changes in existing facilities.
4. Poultry products are examined and labeled according to official grade at the processing plants and terminal market levels.
5. Inspection is provided at the processor level for all egg products produced in the state.
6. Eggs are inspected for compliance with North Carolina and Federal laws at all levels of marketing.

History and Statutory Authority

1. Grading of poultry and poultry products was begun in 1937 through a cooperative agreement with the U. S. Department of Agriculture.
2. Service assistance was first provided the state's poultry industry in 1938.

3. The N. C. Egg Law (Chapter 106, Article 25A) was enacted in 1955.
4. The Shell Egg Surveillance Act was enacted by Congress in 1970. (Public Law 91-597)
5. Mandatory Egg Products Inspection was enacted by Congress in 1970 and is administered jointly by USDA and NCDA. (Public Law 91-597) and (IOUSC 103L-1056)

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: The cost of providing grading service continues to rise with each increase in salary, fringe benefits, administrative, and travel allowance. At the same time, the margin of profit and the economic position of the poultry industry continues to recede. The cost of this program is borne by industry and thus each increase in cost renders the service less desirable and threatens possible extinction.

Response: An extensive study will be made to discover ways to reduce cost to industry. Areas to be investigated are:

1. Combine plants or allow a grader to serve more than one plant, when geographically feasible.
2. Reduce overtime, work with management to schedule product for processing during regular shift hours.
3. Reduce the number of graders utilized by the plant by processing all graded product on the first shift.
4. Seek ways to expand market for graded product, thus reducing the per unit cost.
5. Reduce shift premium charge by processing graded product only on the first shift.

III. PLAN FOR THE 1975-77 BIENNIUM

Indicators of Expected Accomplishments

| Item | 72-73 | 73-74 | 74-75 | 75-76 | 76-77 |
|---------------------------|-------------|-------------|-------------|-------------|-------------|
| Product Graded | 543,800,487 | 544,000,000 | 544,900,000 | 546,000,000 | 547,000,000 |
| Egg Products Inspected | 8,487,850 | 8,600,000 | 8,600,000 | 8,600,000 | 8,600,000 |
| Surveillance Visits | 981 | 1,040 | 1,100 | 1,160 | 1,220 |
| Egg Law Visits | 11,115 | 11,150 | 11,500 | 11,550 | 11,800 |
| Service Assistance Visits | 425 | 448 | 450 | 460 | 480 |

LIVESTOCK SUBPROGRAM (BUDGET PAGE F-13)I. PROGRAM DEFINITIONPurpose

To assist the North Carolina livestock industry in developing quality livestock; in ordinary and profitable marketing of livestock and livestock products; in improving livestock marketing facilities; in improving slaughtering and packing techniques and profitable marketing of meat and meat products.

Means and Methods Used to Achieve the Purpose

1. Producers, both commercial and purebred, are advised and assisted with selecting and purchasing breeding stock for herd improvement.
2. Special graded sales are planned and organized at preferred locations throughout the state to permit producers to sell feeder calves, stocker cattle, yearling steers, feeder pigs or market hogs on a graded basis.
3. All animals offered in the special sales are graded according to U. S. Standards; grades are explained to producers and advice given on breeding and management practices to improve quality; buyers are secured and assistance provided in arranging for transporting the animals.
4. Close contact is maintained with buyers both within and out of the state to provide as much market strength as possible at each sale.
5. Foreign buyers are accompanied on farm visits to see types of livestock which they are interested in purchasing. Arrangements are made for selecting the animals, securing health papers, meeting quarantine regulations, and securing transportation for the animals.
6. Livestock market operators are encouraged to improve their facilities for handling livestock and are assisted in contacting new buyers for their sales.
7. Grading of red meats according to U. S. Standards is provided packing plants, upon request, on a fee basis.

8. Red meats and meat products being shipped by local packers are approved for acceptance before products leave the plant.
9. Meat packers and processors are assisted in meeting the requirements of OSHA, EPA, and other Federal and State regulations.
10. The state's production of both lambs and wool is pooled and graded in order to attract increased buying power.
11. Horse owners are advised on technical problems such as improving physical facilities for the animals, curbing disease outbreaks and with conducting sales.
12. Horse clinics will be held throughout the state to advise owners on the care, handling, conformation, soundness, etc. of the animals.

History and Statutory Authority

The livestock program was begun in 1923 when the Commissioner of Agriculture established the Division of Markets in the N. C. Department of Agriculture.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Maintaining livestock grading and red meats grading and acceptance work on a self-supporting basis. Costs for carrying on this work are continuing to exceed receipts from fees charged users. For the service to be continued during the ensuing years, it will be necessary to raise grading fees and risk losing some of the present users, to seek additional users and thereby increase volume of products graded or accepted, to seek appropriated funds to subsidize the work, or to discontinue it.

Response: Since the service is provided on a statewide basis to any packer or distributor requesting it, or to any buyer or seller of livestock, special efforts will be made to reduce costs, particularly travel time and expenses on the part of graders. Part-time employees will be trained and used when and where possible as a further means of reducing costs since they will be paid on an hourly basis and only during the time they are performing grading services. City and county school officials will be visited and informed of the advantages and value of requesting bids from meat packers for red meat needs in their

school lunch rooms. By utilizing this system, instead of buying their needs from one supplier only, which, in many instances, is a retail food store, they would be assured of lower prices and better quality products since each shipment would be examined and officially accepted by a licensed meat grader before it left the packing plant. This increased volume of acceptance work would permit more efficient use of the present staff of graders.

III. PLAN FOR THE 1975-77 BIENNIUM

Indicators of Expected Accomplishments

| Item | <u>Actual</u> | | <u>Projected</u> | | |
|-----------------------------------------------------|---------------|---------|------------------|---------|---------|
| | 1972-73 | 1973-74 | 1974-75 | 1975-76 | 1976-77 |
| Feeder Pigs Graded | 229,007 | 240,025 | 245,110 | 250,200 | 260,200 |
| Market Hogs Graded | 61,075 | 70,075 | 75,060 | 80,100 | 86,400 |
| Feeder Cattle Graded | 47,089 | 50,105 | 52,150 | 53,980 | 55,700 |
| Carcasses Graded (million lbs.) | 12.3 | 12.5 | 12.6 | 12.9 | 13.2 |
| Meat Accepted for State Institutions (million lbs.) | 3.4 | 3.9 | 4.4 | 4.5 | 4.7 |
| Feeder Pig Buyers Contacted | 210 | 275 | 280 | 290 | 300 |
| Feeder Pig Producers Assisted | 350 | 375 | 400 | 450 | 475 |
| Purebred Sales Assisted | 17 | 18 | 20 | 22 | 24 |
| Farmers Assisted in Selecting Breeding Stock | 335 | 360 | 400 | 425 | 450 |
| Grading and Cutting Demonstrations Conducted | 15 | 16 | 17 | 18 | 20 |
| Farmers Assisted in Selecting Breeding Stock | 145 | 150 | 160 | 175 | 185 |

| Item | Actual | | Projected | | |
|------------------------------------------------------------------|---------|---------|-----------|---------|---------|
| | 1972-73 | 1973-74 | 1974-75 | 1975-76 | 1976-77 |
| Purebred Cattle | | | | | |
| Sales Assisted | 14 | 16 | 18 | 20 | 21 |
| Cattle Bought for Producers and Feeders | 1,675 | 1,785 | 1,850 | 1,900 | 2,000 |
| Fat Cattle Sold Direct | 570 | 660 | 725 | 800 | 900 |
| Livestock Shipments for Export (Breeding Swine and Cattle) | 0 | 5 | 8 | 12 | 16 |

HORTICULTURAL CROPS SUBPROGRAM (BUDGET PAGE F-14)I. PROGRAM DEFINITIONPurpose

The horticultural crops program assists in the development of North Carolina fruit, vegetable and ornamental crop industries, and assists producers in obtaining the best markets for their products.

Means and Methods Used to Achieve the Purpose

1. Producers are informed through news media, group meetings, and personal contact of products in demand and of production potentials for their respective areas.
2. Buyers, both within and out of the state, are informed of production prospects, by commodities, as to locations, harvest dates, quantity, quality, and varieties.
3. Producers and buyers are brought together and assistance provided in obtaining harvesting or grading equipment and in making transportation arrangements.
4. Processors, both within and out of the state, are assisted in obtaining farmer commitments for producing desired acreage of specific crops.
5. Contracts of all firms who enter into written agreements with farmers for the production of specific crops are reviewed and approved to protect producers from unfair practices.
6. Cooperation is rendered to N. C. State University and equipment manufacturers as a means of stepping up the development of more satisfactory harvesting equipment.
7. Growers are encouraged and assisted in organizing into groups to aid them in harvesting, grading, transporting, and marketing their crops.
8. Growers are advised on harvesting practices, grading, packing, transporting, and selling their crops for the best possible returns.

9. Growers are appraised of the advantages of producing crops for "pick-your-own" interests.
10. Growers are encouraged to sell more of their production as direct as possible through well planned and attractive roadside markets or through locally owned farmers' markets.
11. Assistance is provided organizations, municipalities, and others in planning facilities for farmers' markets.
12. Consumers are appraised through news media and mailed bulletins on the location of "pick-your-own" operations, roadside markets, and farmers' markets.
13. The official grade for all fresh fruits and vegetables is determined and certified at all levels of trading to identify quality and assure fair pricing.
14. Apples and peaches offered for sale in the state are checked on a regular basis at packing houses, wholesale outlets, and retail stores for proper labeling as required by the N. C. Labeling Law, and the maturity of the apples are checked as required by the Maturity Amendment to the Law.

History and Statutory Authority

1. The horticultural crops program was begun in 1923 when the Commissioner of Agriculture established the Division of Markets in the N. C. Department of Agriculture.
2. Chapter 106, Article 14 authorizes the Board of Agriculture to make rules and regulations to protect producers of fruits and vegetables from unethical trade practices of handlers.
3. Chapter 106, Articles 17 and 18 authorize the N. C. Department of Agriculture to establish and maintain standard grades for farm and horticultural crops and animal products.

FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Supervising the planning and construction of a wholesale-retail farmers' market in Western North Carolina and managing the facility upon its completion. With the destruction of the old Lexington Avenue Market in Asheville for an urban development project, a

serious need exists for a facility where the many small farmers in that area can efficiently market their fresh fruits and vegetables. The value of the fruits and vegetables and ornamental production in an 18-county area of Western North Carolina rose from \$7,500,000 in 1950 to \$19,300,000 in 1963 and was estimated at \$33,600,000 in 1973. The addition of a modern marketing facility where individual producers can sell their products will provide the impetus for vast increases in production of these commodities and will do much to raise the income level of that area. Agricultural leaders estimate production values could and likely would exceed the \$50,000,000 level within a five-year period following completion of the proposed market.

Response: Assist an appointed site-selection committee in choosing the most logical site for the market to best serve the Western Carolina area and utilize the \$1,000,000 appropriated by the 1974 General Assembly to purchase the land, install utilities, and construct the buildings and manage the market's operations.

- b. Problem: Maintaining the fruit and vegetable grading service on a self-supporting basis. Because of the competitive labor market and the salaries that must be paid to obtain qualified workers, it is necessary to constantly increase fees for the service in order to maintain the program. There is a limit, however, to which this can be done as costs to the user can exceed what he considers its value to him in marketing his products. When this occurs, it will then become necessary to discontinue the service or seek appropriated funds to subsidize the program.

Response: A careful study will be made of the overall grading service to determine if there are inefficiencies in its present operations; correction of these will follow as rapidly as possible. Actual locations of graders will be considered more carefully as a means of cross-utilizing them and thereby reducing costs to the users.

- c. Problem: Rendering maximum services with limited resources. The very nature of the work carried on in this program requires considerable travel in order to get the job done. Continuing rises in travel costs during recent years has made it necessary to decline requests for services on a number of occasions or

render only token assistance by telephone or letters. Present staff resources are adequate to meet demands for assistance, but if the inflationary trend continues, the effectiveness of these employees in carrying out their responsibilities will be further impaired unless additional travel funds can be made available.

Response: Establish a more rigid priority system in handling requests for assistance to assure maximum utilization of travel funds. This will mean that an increasing number of requests will necessarily be handled less effectively by telephone or letters when personal contact would be preferable. Schedule trips in such a way that a maximum number of requests can be handled with a minimum of travel. Such a system will necessitate delays when time is of the essence because of perishability of the commodities. When special requests for contacting out-of-state buyers to encourage purchases of a given North Carolina product is made, the individuals, firms, or organization making the request will be asked to share in expenses involved in rendering the service.

III. PLAN FOR THE 1975-77 BIENNIUM

Indicators of Expected Accomplishments

| <u>Item</u> | <u>1973-74</u> | <u>1974-75</u> | <u>1975-76</u> | <u>1976-77</u> |
|---------------------------------------------------------------|----------------|----------------|----------------|----------------|
| Pickle Buying Stations | 253 | 4 | 4 | 2 |
| Sweet Potato Processing Plants | 2 | 1 | 0 | 0 |
| Apple Processing Plants | 3 | 1 | 1 | 0 |
| Wineries | 0 | 0 | 1 | 0 |
| Buyers for Processing Apples | 6 | 1 | 2 | 0 |
| Fruit and Vegetable Marketing Associations | 9 | 1 | 1 | 1 |
| Roadside Markets, Curb Markets and "Pick-Your-Own" Operations | 490 | 4 | 5 | 5 |
| Farmers' Markets | 1 | 1 | 2 | 2 |
| Terminal Markets | 1 | 1 | 0 | 0 |

| Item | Pounds Graded | Expected Poundage to be Graded | | |
|--------------|---------------|--------------------------------|-------------|-------------|
| | 1973-74 | 1974-75 | 1975-76 | 1976-77 |
| Farmer Stock | | | | |
| Peanuts | | | | |
| Graded | 484,500,000 | 486,500,000 | 491,500,000 | 496,500,000 |
| Fresh F&V | | | | |
| and Milled | | | | |
| Peanuts | | | | |
| Graded | 386,500,000 | 388,500,000 | 391,500,000 | 394,000,000 |

Analysis of Major Changes Proposed

a. Providing Additional Facilities for Marketing

Even though farm numbers continue to decline in North Carolina, the state still ranks No. 4 among the 50 states in total number of farms. And, because of the vast number of small farmers, many of whom rely on small acreages of fruits and vegetables as a chief source of income, they badly need facilities through which to market their production. Such facilities are seriously lacking in the state, particularly in the western counties where there is a high concentration of small farmers.

A modern wholesale-retail farmers' market in Western Carolina would provide a large number of farmers with a place to sell their produce in an efficient manner. A portion of the funds (\$1,000,000) was provided by the 1974 General Assembly to provide such a facility.

| | <u>1975-76</u> | <u>1976-77</u> |
|-------|----------------|----------------|
| Staff | \$39,000 | \$41,000 |
| Cost | \$ 3,000 | \$ 3,200 |

The addition of one position to serve as assistant manager of the market and supervise the apple grading work in the Western Carolina area would mean that these services could be rendered far more efficiently and economically than those now being provided. Also needed will be one custodial position to keep premises clean and four positions to man the gate and provide security on a 24 hour a day, 7 days a week basis.

No legislative or administrative changes would be required to implement this program as the employee

who is now in charge of the Department's Western Carolina market news and grading work would absorb the duties as overall manager of the farmers' market. Such an arrangement would allow for more overall supervision of grading during the apple harvesting season and would permit needed management on a full time basis at the market.

A plan that would permit the Department's present employee in that area to assume management of the market in conjunction with his already heavy duties and assign another position there to supervise grading of apples during harvest was ruled out because (1) it would place too much responsibility on one man, (2) operations of the market could not be properly managed, and (3) costs for grading would be increased to the users.

FIELD CROPS SUBPROGRAM (BUDGET PAGE F-15)I. PROGRAM DEFINITIONPurpose

To improve the marketability and economic and physical efficiency in the processes related to the marketing of tobacco, cotton, grains, and other field crops.

Means and Methods Used to Achieve the Purpose

1. Grain producers, buyers, and processors are provided with information and assistance relative to management and quality control in the harvesting, drying, handling, storage, and processing of grain crops.
2. Economic feasibility surveys are made for producer groups, marketing agencies, and processors to determine the need for new or expanded marketing storage, and processing facilities in order to better serve the needs of grain and seed producers in an area.
3. Producers are provided with information and assistance in the use of grain banks, public warehouses, and other commercial storage operations, including information on grain contracts and agreements between producers and processors.
4. Producer groups are assisted in establishing a sound basis for bargaining with local and terminal marketing firms through grain marketing and grading schools to familiarize them with standard grades and other factors relative to market prices and grain trading in both domestic and export markets.
5. Operators of cotton gins, grain marketing facilities, and milling operations are provided with information and assistance in meeting the requirements established by the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration so that these marketing and processing facilities serving producers can continue to operate.
6. Grain producers are provided with information and assistance in determining the need for and type of on-the-farm storage, as well as its operation for quality control.

7. Under the U. S. Grain Standards Act, official grading service is provided to buyers and sellers of grain on a voluntary basis.
8. Tobacco Boards of Trade are provided with official data, 30 days prior to market opening, to be used in determining adequate fire insurance for each auction warehouse as required by law.
9. Personal contact is made with all tobacco auction warehouses to provide information, materials, and assistance necessary in obtaining notarized monthly leaf sales reports as required by law.
10. Tobacco market leaf sales data is summarized by computer for permanent records, and monthly and season bulletins are issued to news media and others requesting it as required by General Statutes. A season summary of leaf sales is also prepared for the N. C. Department of Revenue as a basis for taxing warehouses for privilege licensings.
11. Tobacco growers and warehousemen are provided guidelines and assistance in developing a systematic scheduling plan for receiving farmers' tobacco in an orderly manner at the warehouse.
12. In cooperation with N. C. State University and the U. S. Department of Agriculture, assistance is provided in the evaluation of innovative ideas designed to fully mechanize the tobacco marketing process.
13. Information and assistance are provided in developing cotton marketing procedures and criteria which will enable the producer to maintain the inherent quality of his cotton as it enters the domestic and export markets.
14. Producer and industry groups are assisted in keeping abreast of new and improved technology on handling, processing, packaging of cotton and other field crop commodities so as to better meet the current domestic and export market demand.
15. Cotton quality reports are prepared and distributed to ginnerers and others and are used as a means of quality control in locating gins with malfunctions that are causing quality problems.

16. Advance planning with public carriers is being done so that transportation equipment will be available at the proper place and time needed to move grain and other agricultural commodities and farm supplies, and rate structures may be developed that will allow shippers and receivers to better serve the agricultural interests of this state.
17. Assistance is provided the tobacco industry in developing a plan to show the availability of truckers licensed to haul tobacco, and the distribution of these public carriers to market areas as needed to eliminate the bottleneck of moving tobacco from sales floors to processing plants so that farmers' marketing progress will not be slowed by blockages on warehouse floors.

History and Statutory Authority

The field crops program dates back to 1923 when the Commissioner of Agriculture, under Statutory Authority, established the Division of Markets in the North Carolina Department of Agriculture.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Maintaining the grain grading service on a self-supporting basis. Since there are no funds appropriated for conducting this service, it must be maintained from fees charged to each user. As competition for qualified workers has become keener and salaries and wages have continued to rise, costs for providing grading services have risen accordingly and have resulted in increased fees being charged the users. While official grading is important to the grain producer, grain dealer, miller, or other end users because it identifies quality of the grain being traded and, in effect, establishes a uniform price basis for the grain, it is recognized as a valuable marketing tool. Without this service and without producers being aware of the factors that determine grade, they would have to sell their grain strictly on the honesty of the buyer. And there is already increasing evidence on the part of buyers that costs for this service have reached such a level that they contend they can no longer pay for it. If this occurs, there will be no alternative except to seek appropriated funds for subsidizing the program or to discontinue it.

Response: Every effort will be made to determine if any present procedures can be altered to render the service more efficiently and more economically. Increased use will be made of part-time employees to obtain maximum returns for labor investments.

III.

PLANS FOR THE 1975-77 BIENNIUMIndicators of Expected Accomplishments

| <u>Item</u> | <u>Existing</u> | <u>Projected Increase</u> | | | |
|----------------------------------------------------------------|-----------------|---------------------------|---------|---------|--|
| | 1973-74 | 1974-75 | 1975-76 | 1976-77 | |
| Commercial Grain Storage (million bu.) | 51 | 4 | 3 | 3 | |
| On-The-Farm Grain Storage (million bu.) | 35 | 1 | 1.5 | 1 | |
| Grain Graded (million bu.) | 30 | 2 | 3 | 3 | |
| Grain Firms Assisted in Meeting Air Pollution Controls | 10 | 245 | 300 | 75 | |
| Cotton Gins Assisted in Meeting Air Pollution Controls | 78 | 13 | 3 | 2 | |
| Cotton Gins Assisted in Air Pollution Maintenance | 30 | 35 | 45 | 60 | |
| Grain Stores & Millers Assisted with Quality Control | 200 | 225 | 240 | 300 | |
| Tobacco Warehouses Assisted in Installing Mechanized Conveyors | 42 | 16 | 20 | 25 | |
| Assistance in Establishing Mechanized Tobacco Marketing System | 0 | 1 | 0 | 1 | |
| Grain Market Expansion Feasibility Surveys Prepared | 8 | 7 | 9 | 10 | |

SPECIAL MARKETING SERVICES SUBPROGRAM (BUDGET PAGE F-16)I. PROGRAM DEFINITIONPurpose

To provide all levels of marketing with technical services, mainly engineering assistance, and factual information on commodity market conditions, as well as professional assistance in developing new markets, both domestic and foreign, as a means of increasing efficiency in marketing and improving the quality of the state's agricultural products.

Means and Methods Used to Achieve the Purpose

1. Engineering assistance is provided to the state's agricultural industry in the form of: (1) Technical assistance through consulting with and making recommendations concerning better methods and facilities for handling, processing, storing, and marketing agricultural products to achieve greater efficiency and quality control; (2) Industrial assistance to determine the optimum combination of men, materials, and equipment through the use of time and motion studies; (3) Safety assistance for employing engineering principles to reduce physical hazards such as noise levels, vibrations, electric shocks, etc.; (4) Environmental assistance by representing agriculture on various task forces which generate policy and rules and regulations involving agriculture; and (5) Preparing detailed plans for constructing new marketing facilities or for renovating existing facilities.
2. Accurate market information (prices and supply and demand conditions) is assembled, summarized, and disseminated daily to the general public through the various news media and mailed reports on all of the major farm commodities produced in the state.
3. Interested persons are assisted in organizing and chartering farm cooperatives to aid them in purchasing farm needs and in marketing farm products.
4. Agricultural fairs are carefully inspected each year for compliance to the General Statutes, and management is advised on needed facility improvements and operation practices.

5. Close contact is maintained with all buyers including wholesalers, retailers, brokers, institutions (restaurants, schools, hospitals) to encourage them to buy and use North Carolina products.
6. Exploration of sales of North Carolina farm products in foreign countries is made in cooperation with the Foreign Agricultural Service of the U. S. Department of Agriculture through personal contacts with foreign buyers and exhibiting North Carolina products at various Trade Shows throughout the world.
7. The Western North Carolina Agricultural Center is maintained and managed to provide a facility for people in the western counties to conduct various agricultural events such as livestock shows, 4-H Club activities, etc.

History and Statutory Authority

A technical service program providing minimal engineering services was begun in 1937. A more sophisticated engineering service was started in 1958, and the engineering section was established in the Markets Division in 1971. Three new areas of engineering, industrial, safety and environmental, were added in 1973.

The first cooperative agreement between NCDA and USDA to establish a market news program in the state was signed in 1937 and covered reports for livestock, dairy, and poultry and fruits and vegetables. A similar agreement on grain was put into effect in 1951.

A branch market news office was established in Asheville in 1946.

The Western Carolina Agricultural Center was completed for use in 1967.

A bonafide program of promoting the increased use and consumption of North Carolina farm products was undertaken in the Markets Division in July, 1966. These activities were expanded to include foreign trade development in January, 1969 by assigning one staff member on a full-time basis to this work.

The N. C. Mutual Association and Cooperative Laws (Chapter 54, Subchapter 4) was enacted in 1915 and dealt with Mutual Associations. (Chapter 54, Subchapter 5), dealing with Cooperative Associations, was enacted in 1921.

The Non Profit Corporation Act (Chapter 55A) was enacted in 1955.

Protection and Regulation of Fairs (Chapter 106, Article 45) was passed in 1949.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Increasing complexity in agricultural production, marketing and processing systems in North Carolina has created the need for more comprehensive engineering services.

During the past six years the nature of the requests for engineering assistance has changed significantly. The table below shows a definite decline in the number of completed projects.

| Fiscal Years | 68-69 | 69-70 | 70-71 | 71-72 | 72-73 | 73-74 |
|--------------------|-------|-------|-------|-------|-------|-------|
| Completed projects | 98 | 94 | 90 | 83 | 61 | 43 |

As the projects became more involved, the number that could be handled on a comprehensive basis declined. Therefore, out of necessity, the percentage of requests handled on a consulting basis increased.

With the continuing trends in agriculture toward mechanization, acute labor shortages, increased domestic and world demand for food and fiber, and increased social and regulatory constraints, the demand for thorough, in-depth engineering services are growing rapidly.

As a result of this, three new areas consisting of safety, industrial, and environmental engineering were added to the Engineering Section in 1973. The demands and responsibilities in these areas have grown tremendously, and it is expected that this trend will continue.

Response: The need to increase the depth, quality, and quantity of engineering services available to North Carolina agriculture can be met in large measure by realignment and designation of priorities. Development of comprehensive sample plans for the major categories of agricultural enterprises would

allow the engineers more time to devote to problems of general concern to agriculture (materials handling, energy, water and waste management, etc.). Engineering technicians are needed to adapt the sample plans to specific situations and to handle routine items for which engineering time is presently required, such as data collection, calculating, measuring, etc.

- b. Problem: Developing and maintaining foreign markets for North Carolina agricultural products. While North Carolina ranks 9th among the 50 states in value of agricultural exports, there is a need for developing additional markets as a means of increasing net returns to farmers and encouraging increased production.

Response: Assign one employee to full-time work on foreign trade who will be personally calling on foreign buyers, participating in foreign trade shows sponsored by the Foreign Agricultural Service, and maintaining close contact with North Carolina individuals and firms interested in exporting their products. Cooperate in joint export efforts with the other 14 southern states, organized into the Southern United States Trade Association, for the purpose of better utilizing total resources in foreign trade development. Cooperate with the Departments of Natural and Economic Resources and Transportation in staffing an office in Zurich, Switzerland to represent North Carolina agriculture throughout Europe. Work cooperatively with the Foreign Agricultural Service of the U. S. Department of Agriculture and follow through on trade leads provided by FAS. Maintain a close working relationship with the seven commercial exporting firms now operating in the state as a means of assisting them in obtaining products for export and in providing them with trade leads.

III. PLAN FOR THE 1975-77 BIENNIUM

Indicators of Expected Accomplishments

Engineering Services

| Item | Accomplished | Projected Achievements | | |
|------------------|--------------|------------------------|---------|---------|
| | 1973-74 | 1974-75 | 1975-76 | 1976-77 |
| Projects | 43 | 30 | 35 | 40 |
| Sample Plans | 0 | 1 | 1 | 2 |
| Special Problems | 0 | 2 | 3 | 4 |

| Item | Accomplished | Projected Achievements | | |
|--------------------------|--------------|------------------------|---------|---------|
| | 1973-74 | 1974-75 | 1975-76 | 1976-77 |
| Consultations | 14 | 20 | 25 | 30 |
| Post Project Evaluations | 0 | 5 | 10 | 15 |
| Site Evaluations | 0 | 10 | 12 | 15 |
| Publications | 0 | 1 | 1 | 2 |

Market News Services

| Item | Existing | Projected Increases | | |
|----------------------------------|----------|---------------------|---------|---------|
| | 1973-74 | 1974-75 | 1975-76 | 1976-77 |
| Radio Broadcasts (daily) | 3 | 4 | 4 | 5 |
| Livestock Auctions Covered | 5 | 5 | 6 | 6 |
| Graded Pig Sales Reported | 11 | 11 | 12 | 12 |
| Graded Market Hog Sales Reported | 1 | 4 | 5 | 5 |
| Daily Telephone Requests | 30 | 37 | 50 | 65 |
| Mailed Bulletins (weekly) | 3,133 | 3,300 | 3,700 | 4,000 |
| Grain Commodities Reported | 7 | 7 | 7 | 7 |
| Feed Items Covered | 0 | 0 | 4 | 4 |
| Broiler Processors Contacted | 17 | 17 | 17 | 17 |
| F & V Reports (Fob) Released | 4 | 4 | 5 | 5 |

Cooperative Services

| Item | Existing | Organized | Projected Increases | | |
|-------------------|----------|-----------|---------------------|---------|---------|
| | 1972-73 | 1973-74 | 1974-75 | 1975-76 | 1976-77 |
| Farm Cooperatives | 357 | 21 | 26 | 30 | 35 |

Foreign Trade

| Item | Million | | | | |
|----------------------------------------------|---------|---------|---------|---------|---------|
| | 1972-73 | 1973-74 | 1974-75 | 1975-76 | 1976-77 |
| Value of North Carolina Agricultural Exports | \$ 526 | \$ 548 | \$ 575 | \$ 600 | \$ 620 |

Analysis of Major Changes Proposed

a. Realignment of Engineering Service Priorities

North Carolina agriculture's need for more comprehensive engineering services continues to grow despite recent expansions into the areas of safety, industrial, and environmental engineering. The increased demand is not so much for work in other areas but more for in depth services in areas that are currently included in the program. Increased complexity of agricultural systems brought about by increased mechanization, labor shortages, increased demand for food and fiber, and increased legal and social constraints has generated this need.

In order to implement these changes, personnel responsibilities within the section will be modified so that sample plans can be developed. Sample plans will include layout drawings, recommended specifications and types of equipment, estimated cost, recommended types of construction, production capacity, and a manual of operation and management procedures. Field data, consultations, and incorporation of the best features of individual plans already designed by the section will serve as the basis for developing the sample plans.

Administrative and procedural changes to meet the above needs are: Develop sample plans, adapt sample plans to specific cases of general concern to broad segments of agriculture, work out thorough engineering solutions to specific problems common to broad segments of agriculture, and make the results of this work generally available.

To accomplish these objectives, additional funding of approximately \$30,000 will be needed for an engineering technician and additional secretarial services. This would supply manpower needed for data collection in developing the sample plans and for adapting the sample plans to specific applications once the sample plans are developed. This is the key feature that would free the engineers from routine tasks, for which detailed engineering is not required, and allow them to work on the solution of problems of greater significance to agriculture in a more comprehensive manner.

The following benefits would be derived from these changes:

1. Engineering services would be available to a much greater percentage of the agricultural community.

2. Quality of the services would be upgraded.
3. Engineers would have more time to devote to problems of greater significance and concern to agriculture, both externally and within the Department.
4. The time lag between initiation of request and project completion would be reduced greatly.
5. Projects now requiring the greatest percentage of engineering time could be handled to a great extent by sample plans.

An alternative solution to meet the above objectives was to significantly increase the engineering section to the extent that the demand for more comprehensive engineering services could be met. This solution was rejected because it was felt that by realignment of priorities and the development of sample plans that the same objectives could be accomplished more efficiently.

b. Development of More Comprehensive Engineering Services

The development of sample plans and associated reorientation of engineering services will require expanded expenditures estimated at \$10,000 necessitated by: (1) additional training to allow the engineers to develop skills related to particular areas of agricultural concern, (2) reproduction and distribution of sample plans and publications, and (3) equipment for data collection and analysis.

This would allow for expertise to be developed in these areas and provide a means for the knowledge to be documented and made available to North Carolina agriculture.

An alternate solution to item (1) above would have been to employ additional personnel that were knowledgeable in new areas of technology. This solution was rejected since additional skills in technology could be acquired by the present engineering staff at a minimal cost compared to additional personnel.

c. Meeting the Increasing Demands for More and Varied Market Information

Today, more than ever, farmers need and want all of the pertinent market information they can get on a

regular basis to aid them in making marketing decisions. Not only do they need commodity prices on a daily basis, but they need more factual information on current supplies, projected supplies, demand indicators, and conditions in other market areas to help them determine when to sell as well as where to sell. Livestock and poultry farmers, for example, need and want information on the feed grain markets at both the local and national levels. Feed manufacturers, by the same token, request more and more factual information on the livestock and poultry situation including current conditions and projected trends. An increasing number of farmers are requesting market reports on commodities heretofore not reported. In many instances, these represent production of such magnitude that with only a limited knowledge of market conditions, farmers could be severely handicapped when such a product(s) is marketed. These increased needs and demands cannot be met with existing resources.

To provide the additional services as indicated would involve a cost of approximately \$25,000 annually to cover salaries for an additional market reporter, a reporter's aide, and travel expenses.

Benefits of this change include:

1. More detailed information on commodities now being reported.
2. Regular reports on additional commodities.
3. More efficient handling of requests for detailed information.
4. Improved dissemination (radio, television, newspapers).

No legislative or administrative changes would be required to implement this change as it would involve nothing more than an expansion of the present program.

There is no alternative solution to this problem because the requests for and need for this type of information are quite specific. Therefore, providing only a portion of the needs and on an infrequent basis would accomplish very little.

d. Selling North Carolina Farm Products in Overseas Markets

While foreign markets provide an unlimited outlet for North Carolina farm products, oftentimes considerable

contact work and sales promotion are necessary before the first sale is consummated. Follow-up contacts through personal visits or by correspondence are also necessary in order to maintain these market outlets. Coupled with this is the need for personal contact with in-state suppliers of saleable products to acquaint them with sales possibilities and with necessary procedures to assure satisfaction on the part of both supplier and purchaser. North Carolina has dropped from 5th to 9th place during the past two years on value of total foreign sales by the 50 states. It is apparent that additional efforts are needed both within the state and in the foreign markets to further develop and maintain a viable system of utilizing these market outlets.

There are many benefits to be accrued from these efforts. First and foremost would be the additional strength foreign sales would give to the domestic market thereby increasing returns to producers. It would also lessen the chances of noticeable surpluses and severely weak markets within the state. As sales develop, increased production would be needed and numerous segments of agriculture would benefit from this.

To accomplish the objectives of this program will require a cost of a minimum of \$75,000. A portion of these funds would be utilized to participate in a jointly staffed European Office with the Departments of Natural and Economic Resources and Transportation. Each of the three agencies would have a representative in the office to concentrate on European markets in behalf of North Carolina. A portion of the funds would also be used for the state's participation in the Southern United States Trade Association (SUSTA) which is made up of 15 southern states organized for the purpose of joint utilization of resources in promoting foreign sales of agricultural products.

There would be no legislative or administrative changes required to implement this program as it would enmesh with our current limited program of work.

Such a program, particularly the work in SUSTA would require joint support from foreign trade programs of the other participating states. The jointly sponsored European Office also would involve cooperative efforts with and on the part of the Department of Natural and Economic Resources and Transportation.

STATE FARM OPERATIONS PROGRAM

The purpose of this program is to maintain and operate institutional farms in the appropriate manner until a further study can be made by the Department of Administration and submitted to the 1977 session of the General Assembly. This program was transferred in July 1974 to the N. C. Department of Agriculture under House Bill No. 1999 which also established a State Farm Operations Commission within the Department of Agriculture. This Commission is charged by law with developing policies for the use of the farms. The legislation further provided that farm production should be directed to meet the institutional needs of the state.

Since the N. C. Department of Agriculture had had no experience in the operation of these farms, and is just acquiring control and responsibility for the farms in July and August of 1974, we can make only general statements with respect to this operation. There is an apparent need for improved maintenance of building, equipment and land. Because of the uncertainty surrounding the ultimate disposition of the state farms, the farm managers have not been given the authority nor funds needed to perform needed improvements in buildings, land and replacement of equipment. Decisions regarding such matters were deferred pending some final determination of the disposition of farms by the institutions and the General Assembly.

The Commission in their organizational meeting on May 10, 1974, stated their policy to be that of continuing the present operation of the farms with farm production directed to meet the institutional needs of the state. Additional policy decisions, particularly those resulting in material changes in farm operations, will be the responsibility of the Commission. It is our plan to operate the farms in conformance with this policy and future policies which may be established by the State Farm Operations Commission.

To cover administrative costs for operation of this program, the Department will attempt to provide such funds by transferring any available funds with the approval of the Office of State Budget.

AGRONOMIC SERVICES PROGRAM (BUDGET PAGE F-20)I. PROGRAM DEFINITIONPurpose

To provide diagnostic services and follow-up advice to farmers and homeowners on crop production, soil conservation, and environmental quality.

Means and Methods Used to Achieve the Purpose

1. The division carries out methodology research and cooperative state calibration research. The result of this effort is the generation of new knowledge and methods which can be applied to our advisory programs.
2. Periodic updating of the Soil Testing, Plant Analysis, and Nematode Advisory Service Programs are carried out to make them consistent with the latest field calibration and methodology research. This effort is necessary in order that we may maintain quality programs which are pertinent to the needs and problems of our citizens.
3. An educational program utilizing radio, TV, news releases, state and county summaries, state and regional workshops, program brochures, speeches and public contact is employed to acquaint the citizens, and local and state agencies as well, of the benefits to be derived from the services provided. Primary emphasis is on how soil testing, plant analysis, and nematode assay can aid in economic production of commercial crops. However, considerable effort is devoted to showing how the programs can aid in environmental improvement.
4. All samples received for routine soil testing are analyzed for volume wieght, pH, BpH, organic matter, phosphorus, potassium, calcium, magnesium and manganese. The results of these tests are interpreted and nutrients, lime, and management suggestions made so that optimum plant growth may be obtained.
5. All "problem soil samples" on which the sender is experiencing severe plant nutritional problems receive the red carpet treatment. Each of these samples may have 17 different determinations made on them. An experienced agronomist interprets the results and suggests corrective action. Approximately

50,000 "problem" samples are processed each year.

6. Plant Analysis, as a supplementary tool to Soil Testing and Nematode Assay, is a program which will provide a service in which farmers can obtain a rapid diagnosis of problem areas and often make corrections in that year to prevent a complete crop loss. Plant samples are analyzed for nitrogen, phosphorus, potassium, calcium, magnesium, manganese, copper, and zinc. Additional determinations may be made where the situation warrants. This program, funded January 1973 has undergone the development and introductory service phase. It is anticipated that the level of service will increase for this program for many years to come.
7. Nematodes are one of the principal limiting factors in agricultural production. Not only are the yields frequently and seriously reduced, but the quality of the produce is often lowered by their damage. The Nematode Advisory Service program, funded January 1973, will make it possible for farmers and others to determine if expensive chemical control measures are necessary before the crop is planted.

This program is well into the service phase of activity, and it is anticipated that the level of service which will be demanded, will require that it be increased for many years to come.

8. Effective July 1, 1974, a Regional Agronomist will be hired for Northeastern North Carolina to interpret and promote the programs of the Agronomic Division. This will include Soil Testing, Plant Analysis, and the Nematode Advisory Service. This person will work very closely with individual farmers, Extension, and fertilizer industry personnel in getting, stressing the importance of, and interpreting reports of representative soil samples and advising farmers on fertilizer, lime, disease control, and management practices. This effort will increase the knowledge of and appreciation for these income generating practices.

History and Statutory Authority

A tax was imposed on fertilizer, lime, and landplaster in 1938 to provide for the Soil Testing Service, Statutory Authority Chapter 106, Article 22. During the 1972-73 session of the Legislature, funds were appropriated to establish the Plant

Analysis and Nematode Advisory programs. As a result, the name of the division was changed from Soil Testing to Agronomic to more accurately describe the areas of activity the division was engaged in.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Inadequate staffing will not permit the level of unbiased agronomic advice being demanded by both farmers and homeowners. Agriculture has become a very complex industry as the need for efficiency has increased and technology advanced. In order for the farmer to receive maximum returns on his investment, it is necessary for him to follow a complex program of cultivation; soil testing; plant analysis; nematode, disease, and weed control; and other production practices. To take advantage of the latest technological developments and be able to market a high quality product which is free of blemishes, disease, nematode, pesticide residue, and other unfavorable attributes, he must be aware of the technological developments and their advantages and be able to apply them to his enterprise in an economical way.

Present staffing of the Agronomic Services Program does not permit a close cooperative working relationship with farmers, extension, and fertilizer industry personnel in order to promote the latest technological developments. This is especially true with respect to Soil Testing, Plant Analysis, and the Nematode Advisory Service programs in the Southeast, Piedmont, and Mountains. Demands are being made daily which cannot be adequately met.

It should be realized that the Agronomic Service programs are income generating services which will benefit both producer and consumer alike. The use of these services and accompanying agronomic advice will increase production and production efficiency for the farmers and in turn allow them to sell their commodity in the market place at a lower price which will benefit the consumers. Further, the state will benefit from improved economic conditions.

By the end of the five-year period, increased awareness and use of the Agronomic Service programs should increase farm income in the areas substantially. It is anticipated that by the end of the planning period 75% of the farmers and 45% of

the homeowners will be aware of the benefits to be derived from the use of the agronomic services and will be using them.

Response: Hire three Regional Agronomists, one each to be located in the Southeast, Piedmont, and Mountains.

- b. Problem: Inadequate testing methods to deal with new agronomic and environmental problems. For decades agronomists and soil chemists have had the responsibility for developing methods for characterization of the primary and secondary nutritional status of soils and plants. As a result of the recent trend toward use of high analysis fertilizers, municipal sewage sludge, and animal waste, there is a pressing need for reliable methods for the analysis of micronutrients and heavy metals. Methodology for micronutrients and heavy metals in soils and plants are for the most part nonexistent, and the few methods that do exist are too expensive, time consuming, and inaccurate.

Agronomists are now faced with a diversity of problems, micronutrient deficiencies, on the one hand, as the result of the trend toward high analysis fertilizers, and toxicities as a result of the trend toward recycling of municipal sewage sludge and animal waste containing high concentrations of micronutrients and heavy metals.

Recycling of waste containing toxic levels of heavy metals are already causing problems on commercial turf, around homesteads, and to a limited degree on agricultural lands. With the enforcement of water quality standards, the only alternative for disposal of waste is on the land, and this trend can be expected to continue and cause serious nutritional and environmental problems. Therefore, if the Agronomic Services Program is to respond to these serious nutritional and environmental quality problems, reliable testing methods must be developed for micronutrients and heavy metals in soils and plants.

By the end of the five-year period, it is anticipated that methods will have been developed for monitoring the toxic elements which accumulate in soils and plants as a result of the use of municipal sewage sludge and animal waste. Also, these methods will have been calibrated to field conditions and

therefore, applicable to monitoring and dealing with existing problems.

Response: Hire a Methods Development Specialist (Soil Chemist) as soon as possible to begin development of reliable micronutrient and heavy metal methods for both soil and plants. This individual may also help in the development of methods for nematode assay.

- c. Problem: Request to provide a Pesticide Advisory Service. North Carolinians have increased their use of pesticides substantially over the past few years. This is true around homesteads as well as in agricultural production. Consequently, residues of these materials, and misuse of the materials, have caused substantial production problems as well as possible health hazards. Though the use of pesticides is essential to sound agricultural production, their use must be judicious. Nowhere in the state agencies is there a place where a farmer or homeowner can take a soil sample and have it analyzed for pesticide residues to determine if it is safe to use. The need for this service is obvious. Many pesticides have residual effects which must be assayed in order to determine when it is possible and safe to plant food and fiber crops on fields which have been treated.

Response: Hire a technical program specialist (Agronomist II) and Chemical Analyst I to begin development of the program over the next biennium. This would include compiling the methodology, as well as, review of research and the development of the interpretative program. Service would be on a limited basis for chemical assay and bio-assay.

III. PLAN FOR THE 1975-77 BIENNIUM

Indicators of Expected Accomplishments

A consideration of the following information gives some idea of the extent of services provided and people served by the Agronomic Program:

| | <u>1972-73</u> | <u>1973-74</u> | <u>1974-75</u> | <u>1975-76</u> | <u>1976-77</u> |
|-------------------------------|----------------|----------------|----------------|----------------|----------------|
| Farmers and Homeowners served | 16,000 | 17,500 | 19,000 | 20,000 | 21,000 |
| Soil Samples | 100,000 | 105,000 | 109,000 | 111,000 | 114,000 |
| Chemical Determinations | 750,000 | 821,000 | 900,000 | 920,000 | 940,000 |
| Nematode Assay | 17,000 | 18,300 | 19,500 | 21,000 | 23,000 |
| Plant Analysis | | | 1,000 | 2,000 | 3,500 |

These figures reflect the activities of a three-year rotational program in which the Agronomic Services Program will be serving approximately 52,500 farmers and homeowners. The actual and projected increases in soil samples indicate a continuing concern for efficiency of crop production and environmental quality. Plant Analysis is a new program just being instituted, and the probability for increased service and technical advice is high.

Analysis of Major Changes Proposed

- a. Regional Agronomists The actual and projected increase in the number of people to be served by this program over the planning period indicates the necessity for additional personnel to provide unbiased agronomic advice to the farmers and homeowners, as well as to the other official agencies helping to promote the programs.

During the first half of the 1975-77 biennium, the Regional Agronomists will focus their efforts on identifying the agricultural leadership in their respective areas of the state. They will promote the Agronomic Services programs, interpret reports, and advise farmers and homeowners on proper sampling and use of the services. Another very important part of their work will be to work with farmers and homeowners experiencing severe plant nutritional and nematode problems and therefore, provide the Division specialist with backup information on the correction of the problems. During this time they will be gaining valuable knowledge and experience. During the second half of the biennium, they will be carrying out their previous responsibilities, as well as evaluating major economic crop problems and acreages in the area and identifying and providing agronomic advice on significant nutritional problems which exist.

The number of people served and the increase in farm income over the next biennium will be used to evaluate the programs, results, efficiency, and benefits. It will often be difficult to make a monetary evaluation of the program's usefulness. However, if North Carolina is to fill its role as an agricultural state in providing food and fiber for the ever expanding population, this type of agronomic service must be provided at the earliest possible date.

The requirement for State funding to support program

expansion is \$90,000. These funds will provide salary support for three Regional Agronomists, as well as other general support requirements.

b. Develop Methods for the Analysis of Micronutrients and Heavy Metals

During the first part of the 1975-77 biennium, the Methods Development Specialist (Soil Chemist) will focus his attention on development of analytical methods for the analysis of boron, cadmium, zinc, chromium, arsenic, and lead which may be found in municipal sewage sludge and animal waste in high concentrations. The objective is to develop methods orientated to soils and crops so that these systems may be monitored in order to prevent a toxic build-up which would be detrimental to plant growth as well as environmental degradation.

During the second half of the biennium, the Methods Development Specialist will calibrate the methods to field conditions.

Since overuse and misuse of municipal sewage sludge and animal waste is not only possible, but probable, it is imperative that methods be developed to monitor the toxic factors which would lead to environmental degradation and serious loss of crop yields and therefore farm profits.

Requirements for State funding to support program expansion is \$15,000. These funds will provide salary and supply support. Equipment needs can be supplied from existing programs. The establishment and funding of this position will eliminate the need for the Soil Chemistry Consultant now funded at \$10,000 per year through contractual services (\$25,000 - \$10,000 = \$15,000 funding). This request is for the second year of the biennium.

c. Develop the Pesticide Residue Advisory Service Program

During the first part of the 1975-77 biennium, the Pesticide Agronomist, with the help of the Chemical Analyst I, will compile and evaluate methods for pesticide residue in soils and review all pertinent research. The objective will be to develop an interpretative base for the establishment of a Pesticide Residue Advisory Service program. Major emphasis will be on the development of a bio-assay approach to evaluating pesticide residues toxic to plant growth, as well as, environmental degradation.

During the second half of the biennium, the Pesticide Agronomist will establish the service program on a fee support basis.

Since the trend for pesticide use is increasing, it is also highly probable that residue problems will increase. These residue problems cause a serious reduction in yields and therefore increase the cost of production and cost of the commodity in the market place. Both producers and consumers alike stand to benefit from such a program.

The requirement for state funding to establish and support the program is \$60,000. These funds will provide salary support, as well as equipment and general support requirements.

FEDERAL-STATE CROP REPORTING SERVICE PROGRAM (BUDGET PAGE F-21)I. PROGRAM DEFINITIONPurpose

To provide unbiased statistical information equally to sellers and buyers of farm products so that they are on an equal basis when bargaining on prices. To make available agricultural statistics for the State and each of the counties, farmers, produce buyers, agri-business concerns, planners, and legislators so that they can make wise decisions on production, marketing, and in shaping farm policy.

Means and Methods Used to Achieve the Purpose

1. Data on agricultural subjects are collected by a series of sample surveys, by commodities which result in frequent current reports on the agricultural situation.
2. An annual enumeration is made to obtain data on agricultural production in each of the counties and to adjust the data obtained earlier by sampling.
3. Information is published weekly, monthly, quarterly, and annually as appropriate for the purpose of keeping all interested persons informed on an equal basis.

Administrative Structure

This function is in cooperation with the U. S. Department of Agriculture. The staff is located in Raleigh in the State Department of Agriculture. There is no field force except for part time enumerators who work out of their homes. Approximately 60 percent of the resources come from USDA and 40 percent from the State. The Board of County Commissioners assist in administering the State Farm Census Act.

History

The program began in North Carolina in 1917 as operated by USDA. The State entered into a cooperative arrangement with that agency in 1921 upon the enactment of the Farm Census law. It has remained essentially unchanged functionally, but the scope and methodology have changed materially over time.

Statutory Authority

Chapter 106, Articles 1 and 43

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problems/Trends: Rapid changes in agriculture.
The principal problem facing the agency is that of adapting and adjusting the program and methodology to keep pace with the rapidly changing agricultural structure. The number of farms in the State has declined greatly over the years, but agricultural output and income have advanced dramatically.

| Year | Number of Farms (Thousands) | Cash Receipts From Farming (Thousand Dollars) | Receipts Per Farm (Dollars) |
|------|-----------------------------------|-----------------------------------------------------|-----------------------------------|
| 1950 | 301 | 838,495 | 2,786 |
| 1955 | 260 | 945,660 | 3,637 |
| 1960 | 212 | 1,079,165 | 5,090 |
| 1965 | 175 | 1,208,241 | 6,904 |
| 1970 | 150 | 1,562,213 | 10,415 |
| 1973 | 137 | 2,347,972 | 17,138 |

The opposite trends -- a decline in the number of farms and increases in farm income -- reflect among other things the specialization that is now prevalent in the farm sector. Formerly, nearly all farms produced a sizeable mixture of crops and livestock. Now, many farms are larger and grow only a limited number of commodities. This poses an entirely different problem in collecting statistics. Now, it is almost required that every commodity be considered a separate universe, whereas earlier, when farms were homogenous, the same person could be sampled for many commodities at the same time.

Response: Accelerate the use of newer and more modern statistical methodology. New sampling designs are required so that operations of various sizes are properly represented in the sample.

Additionally, we must progress further toward meeting the needs of modern agriculture by providing greater accuracy, more complete coverage, and improved timeliness in releasing the information. Continued automation of the processes must be accomplished as rapidly as possible.

Moreover, with environmental concerns and the increased emphasis being given to land use planning, our program must be capable of providing additional series of data on such items as land utilization, uses of pesticides and herbicides, and numbers of farms of varying sizes, location, and scope for use in waste management and other environmental decisions.

III. PLANS FOR THE 1975-77 BIENNIUM

During this period we expect to continue the program of providing improved current state and county data to all segments of agriculture and the total population.

Specific projects will be:

1. Continue the process of converting all feasible operations to automatic data processing, including the State Farm Census.
2. Improve the coverage and accuracy of our vegetable and fruit estimating program. More data will be collected from individual producers of these crops since they are so specialized and scattered that normal sampling procedures will not suffice.
3. Make other special surveys as necessary to provide information to commodity groups, environmental administrators, marketing associations or others who need statistical data for decision making.
4. Add new emphasis to the publication and release program to more widely disseminate useful information and to increase voluntary response to important surveys.

WAREHOUSE SYSTEM OPERATION PROGRAM (BUDGET PAGE F-22)I. PROGRAM DEFINITIONPurpose

To protect the financial interests of North Carolina by stimulating the development of an adequate warehouse system for cotton and other agricultural commodities, to enable growers to more successfully withstand and remedy periods of depressed prices, and to provide a modern system whereby cotton and other agricultural commodities may be profitably and scientifically marketed.

Means and Methods Used to Achieve the Purpose

1. License private or corporate warehouse property for the warehousing of agricultural commodities as a component unit of the State Warehouse System.
2. Require bonds to safeguard the interests of the State and of depositors of agricultural commodities with valid, subsisting, and duly authenticated official negotiable warehouse receipts issued under and pursuant to GS 106-441, or the pledgee or transferee of such official negotiable warehouse receipts under GS 106-442.
3. Provide a system of examination and supervision of all licensed public storage warehouses in cooperation with the Warehouse Service Branch, Agricultural Marketing Service, U.S.D.A.
4. Invest State Warehouse System Fund in secured first mortgage notes or bonds to aid and encourage the establishment of warehouses operating under the system.
5. Require financial statements from all local managers.
6. Insure and keep insured to its full value all cotton or other agricultural commodities stored in warehouses operating under the system.
7. Require daily reporting for insurance purposes of all cotton or other agricultural commodities.
8. Approve tariffs of all licensed warehouses.

9. Approve all accounting procedures relating to storage obligations.

NOTE: The system is backed and operates out of a guarantee fund which resulted from a tax placed on cotton during the period from 1920 to 1922.

History and Statutory Authority

The North Carolina Warehouse System program has been in operation since 1920. It is operated by the N. C. Department of Agriculture by authority of Article 38, Chapter 106 of the General Statutes of North Carolina as amended through 1967. This legislation was enacted by the General Assembly at the request of farmers, warehousemen, and other agricultural leaders in order to provide for more orderly marketing of agricultural products. From the enactment of the legislation until June 30, 1922, twenty-five cents per bale ginned was collected through the ginner and paid into the State Treasury to be held there as a special guarantee or indemnifying fund to safeguard the State Warehouse System against any loss not otherwise covered.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Phasing out of warehouse system. As reported in previous plans a phasing out of the warehouse system has been planned and much progress has been made. This decision was made because of the declining cotton production in North Carolina in addition to the liabilities involved and the availability of similar services now available under the U. S. Warehouse Act. The fast changing agricultural situation has brought about a resistance by farmers and warehousemen to the continuing phasing out of the system. The fuel crisis is another factor affecting the cotton grower and cotton warehousing. Since five times as much energy is required to produce a pound of synthetic fiber as it does to produce a pound of cotton, some informed agricultural leaders believe cotton production and warehousing in North Carolina will experience a significant increase in future years. In addition, the boll weevil eradication program as now planned by the government and cotton growers, if implemented and proved successful, would greatly stimulate interest in cotton production. The eradication of the boll weevil would make possible greater cotton production per acre at lower costs to the farmers.

Response: We plan to continue the warehouse system at its present levels and carefully evaluate on a continuing basis the need for state warehouse services in North Carolina. Within five years significant changes of direction, if any, should materialize to the point where more definite plans can be made.

III. PLAN FOR THE 1975-77 BIENNIUM

There were 43 warehouses licensed at the beginning of the 1972-73 fiscal year, and there were 33 when the year ended. During fiscal year 1973-74 the number of licensed warehouses were reduced to 23 with a total capacity for 288,100 bales of cotton.

During the fiscal year ending June 30, 1974, there were 53 audit examinations made at the warehouses licensed by the State Warehouse System requiring 127.75 man days exclusive of travel time. A total of 108,726 warehouse receipts were cancelled and voided. In addition, the Warehouse Superintendent made periodic visits to the warehouses.

It appears desirable to continue operating the State Warehouse System, as requested by several leaders in the cotton industry, at least until it can be determined what direction cotton production and storage will take in the next few years.

NORTH CAROLINA RURAL REHABILITATION CORPORATION PROGRAM
(BUDGET PAGE F-23)

I. PROGRAM DEFINITION

Purpose

To serve as a social and financial instrumentality in assisting to rehabilitate rural individuals and families by enabling them to secure subsistence and gainful employment from the soil and/or from other rural related enterprises in order to make them self-sustaining citizens and thereby reduce the burden of public relief for the needy and unemployed.

Means and Methods Used to Achieve the Purpose

1. Management of federal funds that finance the corporation's activities.
2. Loans made to rural oriented industries to provide gainful employment for rural families.
3. Loans to individuals for the purchase of farms or improvements to farms.
4. Cooperation with FHA in making loans to rural families for purchase of farms or improvements to farms.
5. Student loans to students from rural families who otherwise could not attend college because of financial difficulties.
6. Investments in FHA securities in order to provide additional funds for loans (made by FHA) to rural families.
7. Administration of property owner or in which the corporation has reversionary rights.
8. Other rural investments and grants that have prior approval of the Federal Government.

Administrative Structure

The corporation is governed by a nine member board consisting of the Commissioner of Agriculture, the Director of the Co-operative Agriculture Extension Service of N. C. State University, the Director of the Division of Vocational Education of the State Department of Public Instruction, and the State

Director of the Farmers Home Administration who serve in an ex-officio capacity. In addition, five members are appointed by the Governor for three year terms. Supporting staff functions are provided by the Department on a reimbursement basis.

History

The N. C. Rural Rehabilitation Corporation, a non-profit corporation organized by members of the former N. C. Emergency Relief Administration, was chartered by the state to carry out the duties and powers of the Emergency Relief Administration. The Corporation was designated a State Agency in 1935 by Chapter 137 of the General Statutes.

The Corporation was physically transferred to the N. C. Department of Agriculture in February, 1973, by a Type II Transfer as provided by the Executive Organization Act of 1971.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Restrictive use of available funds due to federal regulations. The funds used by the Corporation in its operation are federal funds which are restricted by federal regulations to certain approved users. Any new use of the funds must have approval of the Federal government prior to use. This factor limits or hinders the corporation from entering into some types of aid that the Board feels will benefit rural North Carolina.

Response: North Carolina delegates to the October, 1974, Annual Meeting of the National Association of Rural Rehabilitation Corporation plan to bring this matter before the full committee, and hopefully a joint effort can be made to request the Federal Government to give the various State corporations more leeway in their operations to improve rural North Carolina.

- b. Problem: Reinstatement of student loan program. Prior to the corporation's transfer to the N. C. Department of Agriculture, a student loan program had been in effect. The program was curtailed due to the large number of uncollectable loans that were occurring. The problem occurred due to the system whereby the loans applications were not properly handled by the colleges and the fact that once the students left school, the college admissions office lost contact with the students. Prior to the transfer, the corporation did not have a full-time staff member to follow up on the accounts which also contributed to the problem.

Response: There is a new student loan program which is handled in cooperation with the Federal Government. Under this program the Federal Government will insure collection of the loans. The corporation board is now in the process of obtaining the necessary information, etc. to begin this program.

FOOD AND DRUG ADMINISTRATION SUBPROGRAM (BUDGET PAGE F-25)I. PROGRAM DEFINITIONPurpose

To insure the most productive and efficient means of implementing the three major regulatory program areas (food, drug, and cosmetics; commercial animal and pet food; and pesticide-fertilizer analysis) with existing resources, as well as to anticipate and plan for the future needs of these programs and any new programs.

Means and Methods Used to Achieve the Purpose

1. Formulation of Division policies within departmental guidelines, including the policies for enforcement of the 14 laws administered by the Division;
2. Frequent consultation with program leaders as to current problems, trends within the regulated industries, and requirements for responding to program needs;
3. Formulation of plans for efficient handling of sample analyses for the Pesticide, Structural Pest, and Fertilizer administrative programs;
4. Planning and construction of Division budget proposals, formal work plans (five-year, etc.), and reports;
5. Planning and construction of all law and regulation changes to be presented for legislative or Board of Agriculture action, and the providing of resource information or presentations on these proposed changes;
6. Review of all major regulatory actions and preparation of any court directed proceedings;
7. Directing of inquiries to the most appropriate sources of information.

History

The administrative subprogram was created in 1973 as a result of Departmental reorganization. During this period, the administrative responsibilities

of the Fertilizer and Pesticide Laws were directed to other Divisions. Responsibilities for analysis of samples taken under these programs remained with the Analytical Division.

At the same time, the Dairy Division was merged with the Analytical Division into what was thereupon named the Food and Drug Protection Division. The Director of the Dairy Division became the Deputy Director of the Food and Drug Protection Division, also assuming the duties of the Food Administrator in this categorical program.

II. FIVE-YEAR PLANNING PERSPECTIVE

The administrative staff will assume a primary role in those areas outlined in the subprograms immediately following this section. A considerable change will be sought in the State Food, Drug, and Cosmetic Act to facilitate regulatory control of industrial changes.

Planning and construction of the new Division Laboratory will ensue with an anticipated January, 1977 moving date.

III. PLAN FOR THE 1975-77 BIENNIUM

a. Major Revision of the State Food, Drug, and Cosmetic Act

The North Carolina Food, Drug, and Cosmetic Act, enacted in 1939, has had no revision since 1949. While the basic tenets of the Law remain fully effectual, there are several additions which are of considerable need, specifically provisions which would deal with: (a) food additives, (b) color additives, (c) pesticide residues on agricultural commodities, (d) current good manufacturing practices inspection authority for prescription human drug manufacturers, (e) certification of all batches of insulin and antibiotics, and (f) requirement that all drugs be demonstrated as effective, as well as safe for the intended use.

Additionally, the Division will likely propose to the Legislature that authority be provided for control of chronic violators of the FDC Act. Such authority would include: (a) annual licensing of food processing and storage facilities, (b) revocation of licenses for a period not to exceed ten days when conditions so indicate, (c) a schedule of graduated penalties

(\$50 - \$500) for persistent violators, alleviating the time-consuming necessity of court proceedings in all but the most flagrant or excessive cases. Provision would be made for court appeal by the defendant on any administrative action.

The Legislature will be asked to void the N. C. Bakery Inspection Law, N. C. Bottling Plant Law, N. C. Flour, Bread and Corn Meal Enrichment Act, N. C. Oleomargarine Law, and the N. C. Artificially Bleached Flour Law, since the purposes of these laws can be more effectively handled by regulations under the State Food, Drug and Cosmetic Act.

Revenue losses would include bakery permits (\$3,470), bottling plant permits (\$820), and bleached flour permits (\$3,375), for a total of \$7,665. An annual operating license fee of \$25 per firm will be asked in the revision of the FDC Act. This will net an estimated annual revenue of \$20,000, or slightly over \$13,000 additional to present.

b. Receiving Personnel for New Food and Drug Protection Division Laboratory

An individual is needed for the FDP Division Laboratory to be responsible for receipt of all incoming bulk mail, freight, equipment, and supplies. The individual will also be responsible for issuance of supplies and reagents from the stockroom, as well as the maintaining of a revolving inventory of this material. The receiving area for the laboratory will be one floor away from the administrative offices and on the back of the building.

COMMERCIAL FEED AND PET FOOD SUBPROGRAM (BUDGET PAGE F-27)I. PROGRAM DEFINITIONPurpose

To regulate the manufacture and distribution of commercial feeds, including canned pet foods and specialty pet foods, in the State of North Carolina. The objectives of the program are: (a) protection of the livestock and poultry feeders and pet owners by assuring them of supplies of satisfactory quality which are adequately and accurately labeled, (b) the protection of manufacturers from dishonest competition, and (c) protection of the consumer of meat, milk, and eggs by reducing the possibility that these animal products may contain hazardous substances.

Means and Methods Used to Achieve the Purpose

1. Strategy: The program primarily provides constraints to prevent or abate undesirable conditions. This is accomplished by strict enforcement of the North Carolina Feed Law and its associated Rules and Regulations.
2. Activities: The activities of the program are essentially as follows:
 - a. Annual registration of commercial feeds, canned pet foods, and specialty pet foods;
 - b. Collection and analysis of official samples;
 - c. Assessment of penalties to manufacturers or suppliers for irregularities beyond reasonable limits found in official samples;
 - d. Issuing "State Stop Sale Orders" on or seizure of misbranded, unregistered, or grossly irregular lots of feed;
 - e. Cancellation of registration, and criminal or civil action in cases of gross and/or continued violations of the North Carolina Feed Law;
 - f. Inspection of feed establishments employing drugs in manufacturing for their compliance with Good Manufacturing Practice Regulations;
 - g. Annual publication of a compilation of program statistics, i.e. number of samples analyzed,

number of deficiencies, stop sales placed, etc.

Administrative Structure

Program administration and analysis of official samples of products are conducted in the Agriculture Building, Raleigh. There are 15 full-time employees at this location. Additionally, five inspectors (one each at Ahoskie, Angier, Liberty, Marshall, and Statesville) perform the necessary field work.

No other state or local agency is involved in a program similar to the commercial feed program. Federal and State Laws require medicated feed establishments to conduct their operation in conformity with good manufacturing practices, and each medicated feed establishment is required under Federal Law to be inspected at least once every two years. The Department is under contract with the Federal Food and Drug Administration for 651 such inspections during FY 73-76.

History

The commercial feed regulatory program has been in existence since about the turn of the century. The Feed Law of 1909 primarily addressed composition of feeds and their adherence to nutritional guarantees. A Canned Dog Food Law enacted in 1939 provided for regulation of canned pet food in a similar manner.

In 1973 the Feed and Canned Dog Food Laws were merged and upgraded into a new Law, conforming closely to the Uniform State Feed Bill authored by the Association of American Feed Control Officials. The new Law provides two major additions to feed regulations: (a) authority for the Department to insure that all feed mills employing medicants use standardized practices of manufacturing to assure safety and effectiveness of the resulting feeds, and (b) allowance of broad umbrella terms for ingredient listings in feed registrations, so as to provide industry with the economic latitude to take advantage of nutrient price fluctuations. Steady progress toward more efficient and effective regulation of commercial feed has been made. Philosophies of sampling and laboratory analysis have been modified to reflect changes in technology in the feed industry; more significance is being placed on medicants (drug and antibiotics), less on

the traditional economic measurements, such as fat, fiber, and ash content.

Statutory Authority

Article 31C of Chapter 106 of the General Statutes of North Carolina, as adopted in 1973, replaced Article 9 and 13 in the statutes. This law is known as the North Carolina Feed Law of 1973.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Increasing instances of harmful residues being detected in animal products as a result of consuming contaminated feed. This problem is discussed under the Food and Drug Subprogram and would be adequately served by the request therein. Refer to Item II b.
- b. Problem: Failure of grower-users to comply with existing rules regarding mixing and feeding of medicated feed. Within the past 18 months there have been 32 reports to the Commissioner from the Federal Meat and Poultry Inspection Program of excessive drug residues in animal tissues. Such incidence with the limited survey which can be conducted by MPIP indicates a gross oversight on the part of grower-users due to several factors: (1) failure of the user to follow feeding directions, particularly as to withdrawal times; (2) improper labeling of the product; or (3) mixing of the wrong drug.

Response: Investigate the establishment of an on-the-farm inspection program for grower-users to ascertain compliance with good manufacturing and feeding practices when employing medicants.

- c. Problem: Increase in quantity of customer-formula feed or contract feeds which are largely exempt from the provisions of the Feed Law. Traditionally, a customer-formula feed has been taken to be a product that was mixed using a customer's grain. The mills furnished other ingredients, mixed the feed, and returned it to the customer.

A customer-formula feed as now defined in G.S. 106-248.33 (9) means feed that is mixed according to specific instructions of the final purchaser. This definition would include such products as:

- (1) A registered feed to which is added a drug or a vitamin;

- (2) A customized feed based on the analysis of forage a feeder is using; and/or
- (3) A feed mixed according to the specific instructions of the final purchaser.

Labeling requirements of such custom-mixed products are rarely being placed on the invoice or delivery slip, as required. Mobile feed mixers are particularly lax in this respect. When no feeding instructions or precautions are furnished with a medicated customer-formula mix, the potential for misuse of the product and consequent adulteration of food for humans is greatly increased.

Response: Investigate the possibility of redefining the term "commercial feed" or inclusion of those feeds that are now largely exempt from the provision of the Feed Law, particularly in the area of medicated feeds. Revisions to the Law would be suggested for the 1977-79 biennium.

III. PLAN FOR THE 1975-77 BIENNium

Indicators of Expected Accomplishments

| <u>Items</u> | <u>1970-71</u> | <u>1971-72</u> | <u>1972-73</u> | <u>1973-74</u> | <u>Est. 1974-75</u> | <u>Est. 1975-76</u> | <u>Est. 1976-77</u> |
|------------------------------------------------------|----------------|----------------|----------------|----------------|-------------------------|-------------------------|-------------------------|
| No. of Products Registered | 5,200 | 5,177 | 5,053 | 5,074 | 5,000 | 5,000 | 5,000 |
| No. of Field Inspections | 6,396 | 8,133 | 11,085 | 11,511 | 10,000 | 10,000 | 10,000 |
| No. of Samples Taken | 3,865 | 4,122 | 3,795 | 4,111 | 4,000 | 3,800 | 3,600 |
| No. of Samples Analyzed for Drugs and Antibiotics | 520 | 805 | 964 | 1,028 | 1,200 | 1,400 | 1,600 |
| No. of State Stop Sales Issued | 60 | 137 | 177 | 130 | 100 | 75 | 50 ⁶⁴ |
| No. of Penalties Assessed | 300 | 203 | 366 | 522 | 500 | 500 | 500 |
| Penalties Moreys Assessed | \$5,152 | \$6,995 | \$14,770 | \$95,000 | \$50,000 | \$50,000 | \$50,000 |
| No. of Medicated Feed Establishment Inspections | -0- | -0- | -0- | 119 | 400 | 400 | 400 |

The number of products registered each year remains rather constant. The number of field inspections has increased approximately 80% during the past three years, but will shortly decline about 15% because of the inspector time required to conduct a medicated feed establishment inspection.

The number of official samples taken has remained rather constant; however, the types of samples taken have changed. While most samples were mixed feeds at one time, greater emphasis has now been placed on feed ingredients. Many more feeds are being analyzed for the presence of guaranteed drugs and for cross-contamination with undeclared drugs. Capability of antibiotic analysis has recently been added. The number of samples is thus likely to decrease during the next five years, because of the increasing number of analyses per sample and the complexity of these analyses.

"State Stop Sale Orders" are issued because the feed in question has not been registered or is improperly labeled. New provisions in the feed law and regulations may decrease the number of orders. First, a substantial delinquent registration penalty will encourage prompt registration of products. Secondly, the acceptance of collective terms for the grouping of ingredients in feed labeling will reduce the number of misbranded or improperly labeled products in the market.

The number of penalties assessed for irregularities in samples of feed has increased. This is due primarily to the high cost and scarcity of feed ingredients, particularly protein and mineral ingredients. No great change is anticipated. The amount of the penalties has increased greatly during the past year. This not only reflects the increase in penalties for irregularities provided by the new feed law, but is in part due to the increased size of the lots of feed which are sampled. That is, more bulk feed in carload or truckload lots is encountered. If changes are made in the penalty schedule, the total amount of the penalties will decrease accordingly.

Medicated feed establishment inspections were begun in March, 1974. Our records indicate there are 400 such establishments in North Carolina. It is expected that each will be inspected at least once each year.

Analysis of Major Changes Proposed

a. Expansion of the Medicated Feed Establishment Program to Include Inspections on the Grower-User Level ("On-the-Farm" Inspections)

To assure proper marketing and/or use of medicated feeds by grower-users (including integrated and contract feed operations, users or customer-formula mixes and on-the-farm blenders), on-the-farm inspections will be initiated. The duties involved would include: (1) review of requirements for usage of drugs in general and those particular drugs being used on specific farms; (2) sampling of feeds being used for animals immediately destined for slaughter, where the particular drug(s) in use demands a pre-slaughter withdrawal period; (3) checking all bills of lading furnished the user for content of labeling.

Additional personnel needed: 1 inspector.

The advantages include: (1) prevention of misuse of drugs in feeds, which may result in harmful residues in human foods; (2) back check on integrator and contract feeder operations, as well as customer-mix formulators, as to placement of required feeding instructions, cautions, and warnings on bills of lading so as to properly inform the user.

If the State Food, Drug and Cosmetic Act is amended by the 1975 General Assembly so as to conform to the Uniform State Act and the Federal Act, authority for on-the-farm inspections will be present and can be delegated to feed inspectors.

FOODS, DRUGS AND COSMETICS SUBPROGRAM (BUDGET PAGES F-29
AND F-30)

I. PROGRAM DEFINITION

Purpose

To protect the health, welfare, and economic interests of consumers, as well as to establish an ethically competitive business atmosphere for the regulated industries, by insuring that the supply of foods, drugs, cosmetics, and medical devices manufactured, stored, sold, or distributed within the State is wholesome, unadulterated, properly labeled, and produced under sanitary conditions, under purview of the ll food and drug related laws. Dairy farmers are assured of receiving full value of all milk sold by requirement of dairies to use accurate measuring and testing devices.

Registration and testing of all commercial automotive antifreezes prior to sale under the Internal Combustion Engine Antifreeze Law is also accomplished in this Branch. The Linseed Oil Law provides authority for regulation of sale of linseed and flaxseed oils.

Means and Methods Used to Achieve the Purpose

The regulatory programs under the above-mentioned Laws are designed to stimulate a high level of voluntary compliance within industry, through:

1. Periodic, planned sanitary inspections of processing, storage, transportation, and display facilities;
2. Physical, chemical, and/or microbiological analysis of regulated products;
3. Training, examining, and licensing of all milk and cream samplers, testers, and weighers;
4. Audit of the wholesale purchase and distribution records of dairies;
5. Investigation of product labeling to assure adequate and descriptive information thereon;
6. Issuance of permits for operation or shipment of products into North Carolina, such as bakeries, soft drink bottling plants, and

- ice cream plants;
7. Registration of products prior to sale in the State, e.g. bleached flours, antifreezes;
 8. Restriction of time, place, quantity, and method of use of materials such as human and animal drugs;
 9. Survey of industrial practices or of a particular species of product;
 10. Presentation of informational workshops for industry personnel;
 11. Embargo of suspect adulterated or misbranded goods to prevent their use or movement in channels of trade;
 12. Destruction of obviously unfit products by process of voluntary agreement by the owner, direct condemnation, or court order;
 13. Issuance of information and/or warning letters to firms not in compliance with the Law;
 14. Hearings to show cause why closure or legal action should not ensue;
 15. As a result of flagrant or persistent non-compliance, the entering of civil or criminal proceedings;
 16. Dissemination of information - news releases, articles in the Agricultural Review, visual aids, addresses to public gatherings.

Administrative Structure

The administrative and laboratory staffs for this program are located in Raleigh, with 15 inspectors operating from their homes at various locations throughout the state. Three field laboratories for performing fat determinations and bacterial counts on dairy products are located in Fletcher, Dallas, and Winston-Salem. Each of the field laboratories is utilized by a dairy inspector assigned to the particular territory.

The Division has authority for inspection of all facilities handling foods, drugs, and cosmetics with

the exception of wholesale meat processors. Where other local or state agencies are involved, the Division does not inspect except under extraordinary circumstances. Local Boards of Health inspect restaurants and retail meat processing facilities. Where a milk shake machine dispensing operation exists within a restaurant, the Division presently inspects this operation only, leaving the balance of the facilities for local health officials, as permits must be issued for the milk shake operation. The State Board of Health administers sanitation requirements in shellfish processing plants.

The Division is under contract (FY 1973-76) to the Federal Food and Drug Administration for 1,026 inspections of food storage warehouses, bakeries, and soft drink bottling plants in the State. Language in both the State and Federal Laws is similar; therefore, policy changes have been minor.

History

The State Chemist position (and consequently the Division of Analytical Chemistry) was originated in 1901 (G.S. 106-19), primarily for the purpose of analyzing "such fertilizers and products as may be required by this Department." The first food-directed Law was the Artificially Bleached Flour Law, promulgated in 1915 for the purpose of restricting toxic bleaching agents. This was followed by the Bakery Inspection and Ice Cream Law in 1921, providing sanitary requirements for these facilities. The Dairy Division was created as a separate Division between 1928 and 1930, concentrating on assurance of sanitary and wholesome dairy products. With the enactment of the Food, Drug and Cosmetic Act in 1938 the Division of Analytical Chemistry assumed authority for all foods, drugs, and cosmetics inspection and testing, with the exception of dairies and wholesale meat and poultry. In 1974 the Dairy and Analytical Chemistry Divisions were merged into the Food and Drug Protection Division, with the State Chemist as Director and the former Dairy Division Director as Deputy Director and Administrator of the food inspection and compliance programs.

Statutory Authority

The Division administers the following regulatory laws:

| <u>Law</u> | <u>Statutory Citation</u> | <u>Date of Enactment</u> | <u>Purpose</u> |
|---------------------------------|---------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Food and Drug Related:</u> | | | |
| Artificially Bleached Flour Law | Art. 21, Ch. 106 | 1915 | Regulation of bleaching agents for white flour |
| Bakery Inspection Law | Art. 21, Ch. 106 | 1921 | Sanitary requirements for bakery operations |
| Ice Cream Law | Art. 26, Ch. 106 | 1921 | Sanitary requirements for ice cream making operations |
| Oleomargarine Law | Art. 23 Ch. 106 | 1931 | Control of margarine ingredients; licensing of wholesale margarine producers and distributors; notices in public restaurants serving margarine; excise tax on certain margarines |
| Bottling Plant Law | Art. 16 Ch. 106 | 1935 | Sanitary requirements for carbonated and still beverage operations |
| Food, Drug and Cosmetic Act | Art. 12, Ch. 106 | 1938 | Prohibition of adulteration or misbranding of any article during manufacture, distribution, or sale; establishment inspection and sample analysis. |
| Dairy Statistics Law | Art. 27 Ch. 106 | 1939 | Requirement for annual report of all dairy processing operations: total receipts of milk and cream; total production of butter, cheese, ice cream, etc. |

| <u>Law</u> | <u>Statu- tory Citation</u> | <u>Date of Enact- ment</u> | <u>Purpose</u> |
|--------------------------------------------|-------------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Milk Audit Law | Art. 28 Ch. 106 | 1941 | Monthly accounting of all fluid milk product purchases and the marketing class in which said milk products sold |
| Flour, Bread, and Corn Meal Enrichment Act | Art. 21A, Ch. 106 | 1945 | Require all white flour, white bread, and corn meal to be enriched with vitamins and minerals lost in processing |
| Milk and Cream Import Law | Art. 28A, Ch. 106 | 1949 | Regulate importation of raw milk and cream into N. C.; permits; records audit |
| Babcock Test Law | Art. 29, Ch. 106 | 1951 | Training, testing and licensing of all commercial milk haulers, weighers, and testers |

Commercial Product Testing:

| | | | |
|-------------------------------------------|---------------------|------|--------------------------------------------------------------------------|
| Linseed Oil Act | Art. 32, Ch. 106 | 1917 | Prevention of sale of adulterated or misbranded linseed or flaxseed oils |
| Internal Combustion Engine Antifreeze Law | Art. 51, Ch. 106 | 1949 | Registration and testing of antifreezes; prohibition of adulterants |

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Continuation of health hazard and quality problems related to processing, transportation, and storage of foods. Persistent regulatory problems continue to be encountered, falling into two basic categories: (1) health or esthetic violations of the food laws, and (2) economic defraudation of the consumer. Violations under (1) are of primal importance, since any adulteration, underprocessing, or recontamination following processing of packaged foods may result in illness, even death. It has been reliably estimated that 2 million cases of food-borne illness occur annually. Recent national

recalls of canned mushrooms and imported chocolate candy verify the extent of the problem. Approximately 15% of all food processing and storage facilities in North Carolina are being found in gross insanitary conditions, with another 10% showing less serious discrepancies which nevertheless need immediate attention.

Due to increased demands for microbiological quality standards for meats, the Meat and Poultry Inspection Service is in need of laboratory assistance. Simultaneously, the Division has been requested to assist local health departments in regard to microbiological sampling in retail meat markets. Data collected will be utilized to set microbial standards on those foods in such need (ground beef, fresh sausage, certain cooked meats).

Filth in foods (insect fragments, rodent excreta, etc.) appears to be increasing. Complaints of this nature have increased from 67 in FY 71-72 to 276 within 11 months of FY 73-74.

Examples of economic defraudation of the North Carolina consumer have included: (1) observation that 33.5% of all ground beef samples analyzed (100 of 299) in FY 73-74 exceeded the maximum tolerance for fat content; and (2) denoting that 27.5% of soft serve frozen dessert samples analyzed in FY 74-74 (1856 of 6743) failed to meet established bacterial standards.

Response: Inspectional and sampling techniques should be studied and upgraded with the intention of focusing heavily on critical control points in processing operations which may introduce hazard to the consumer if improperly supervised. Such efforts should include the aspects of general sanitation as well, so as to aid in reducing levels of filth in food. Plans for sampling should pinpoint those products and processes of greatest concern. Increased pressure should be brought to bear against those firms consistently or flagrantly in violation of the law, in the form of warning letters, hearings, administrative fines, closures, and/or court actions. To stimulate voluntary compliance, more information should be furnished to industry in the form of workshops (similar to the initial sanitation workshop for food warehousemen held in March, 1974), policy

statements, and visual aids. More information regarding Division consumer protection efforts should be furnished the public through press releases, articles in the Agricultural Review, consumer handouts, and addresses to public gatherings.

- b. Problem: Presence of introduced chemical contaminants in foods and feedstuffs. Absolute control of introduced chemical contaminants in foods is not a technically feasible task. All lots of foods and of feedstuffs to be used for animals producing meat, milk, and eggs cannot possibly be screened for all possible contaminants which might be present on a suspect (as for instance pesticide chemicals which might be used in, on, or around a commodity) or an accidental (any other toxic industrial chemical) basis. Catastrophic outbreaks are of sporadic nature; yet one may predict that they will happen with some degree of regularity. For example:

1971 - Millions of dollars loss in the poultry industry from fish meal contaminated with polychlorinated biphenyls;

1972 - Recall from the national market of thousands of lots of tuna with high mercury content, a portion of which was from North Carolina;

1973 - Release of information showing liver cancer-inducing mold toxins in a significant percentage of milk product samples taken in North Carolina;

1974 - Chickens with high levels of chlordane, traced back to contaminated rendering plant fat used in feed manufacture.

A consistent, well-planned monitoring system can mitigate at least a portion of such incidents.

Additionally, an assessment of raw agricultural commodities of economic significance to North Carolina for the effects of the transition from agricultural use of highly persistent organochlorine pesticides to less persistent, but more highly toxic organophosphates and carbamates appears necessary to assure continued confidence in the safety of these foods. Such broad monitoring has heretofore not been possible.

Response: A directed approach should be made to survey those components of the food chain at the time and place of their greatest import for the most likely contaminants based on history and usage, i.e.: (1) feed grains in the late fall after harvest and exposure to field moisture conditions conducive to mold growth and toxin development, and when most reflective of pre- and postharvest pesticide treatment; (2) other raw agricultural commodities (fruits, vegetables, nuts) of economic significance on a systematic basis during the span of harvest; (3) feed ingredients and finished feed through the fiscal year; (4) dairy products, peanut butter, and stored nuts (pecans, Brazil nuts, pistachios) routinely throughout the fiscal year; (5) commercial marine products at points near sources of heavy metal pollution (mercury, lead, cadmium, arsenic, bismuth, zinc).

- c. Problem: Accelerated proliferation of so-called "Imitation" foods. Rising costs of food ingredients within the past several years, particularly those foods and ingredients of animal origin (meat, milk, eggs, and their by-products) have stimulated much technological research in the food industry to duplicate or "extend" natural foods. Within FY 73-74 alone, several notable examples were encountered: an artificial "milk" allegedly composed primarily of vegetable oil and protein with added vitamins and minerals; so-called "honey blends" consisting of predominantly table syrups with some honey; retail sale of extender packets for ground beef, such extenders consisting of dehydrated vegetable protein and spices; and cholesterol-free imitation eggs. When such items duplicate dietary staples and become substitutes for them, then the aspect of their nutritional character becomes foremost. Too frequently, these products enter the market with improper labeling and huckstered advertising. It was found that several statements relative to cholesterol and lactose content, as well as nutritive value of the protein, in the imitation milk were completely untrue, and could have subjected allergic consumers to health hazard.

Response: Labeling and advertising of new replacement foods must be evaluated, challenging industry management: (1) to supply all required information on labeling so as to properly inform the consumer when natural foods and food ingredients are replaced, and (2) to back up any advertising claims with sound research data. Such evaluation must be backed by

adequate laboratory resources to verify industry representations about composition.

- d. Problem: Nutritional labeling of foods. The nature of the American diet is undergoing rapid changes. Many new foods appear on the market each year. A great portion of these foods are convenience foods, placed in a form which involves minimal preparation time and effort. Frequently such foods resemble only slightly the original foods from which they were made. Pair this with the fact that as a whole the people in this country do not have an appreciation for proper nutrition, and the stage has been set for a national nutritional dilemma.

Out of the deliberations of the White House Conference on Food and Nutrition in 1969, the President directed the Food and Drug Administration to arrive at some logical means by which foods could be informatively labeled as to nutritive content so as to provide consumers with a tool to gauge their intake of required nutrients. Such a format has been established and regulations have been published, probably representing the most significant and progressive change in food regulatory philosophy in half a century. It is anticipated that such regulations will be adopted in North Carolina.

A large share of the regulatory responsibility for such labeling and of the represented nutritive composition will fall upon the states. As in many cases, while the federal government has set the policy, its facilities will not nearly be sufficient to accomplish the desired program.

Response: The State should institute a continuously revolving compliance survey of food products which are nutritionally labeled to ascertain that the proper nutritional information appears on the package, and that the product within the package contains those nutrients represented as being therein.

- e. Problem: False and misleading advertising of foods. Media advertisement (newspaper, television, radio, magazines) of foods continues to involve significant opportunities for misleading the consumer. Most notable of these is the so-called "bait and switch" tactic wherein "cheap" prices are advertised for meat carcass cuts by an entrepreneur, but upon visitation, the customer finds himself being switched from a highly unsavory looking animal carcass representing the advertisement to a more

expensive one. Hidden financing charges and actual shortages of meat delivered to the customer are common.

Many advertisements are misleading simply because what they say does not go far enough to properly represent the product. For example, television and newspaper advertisements for main course meat dishes recently marketed by a national firm neglected to prominently mention that the mix as sold was only the spices and accompanying ingredients exclusive of the meat, which had to be purchased and added during preparation. The product has since been withdrawn from the market and relabeled.

Vast proliferation of fanciful names for retail meat cuts now exists, as for instance "Mom and Pop Steak," "Watermelon Steak," and a host of other names which have no meaning of value to consumers.

Response: Specific rules must be promulgated for the advertising and sale of retail commodities which are frequently represented misleadingly to consumers, in particular meats. The Division must additionally set up a routine policy for monitoring local media in regard to appearance of such advertising. Consumers and consumer groups should be advised in detail as to where complaints may be lodged via use of printed pamphlets, addresses to groups, and news releases.

- f. Problem: Responsibility for determination of fat content of farm milk samples. These tests for fat, which are used to determine the price paid to a farmer for his milk, are performed by employees of the firm which purchases the milk. G.S. 106-250 requires the Department to make such checks as are necessary to prevent any dishonesty by the purchaser. There has been interest among milk producers for many years to have the Department perform all official tests made for pay purposes, thus placing the matter in the hands of a disinterested party. Certain plants in Western North Carolina have indicated a willingness to consider such an arrangement on a fee basis. Recent changes in sampling procedures have increased the amount of testing necessary by plants by 250%; thus, outside testing becomes more appealing. If the Department assumed this testing, then no regulatory checktests would be necessary.

An electronic assay approved as an official method now allows for the analysis of several hundred samples daily. Whereas the Department will be assaying as many as 80,000 DHIA samples per year by this method by FY 74-75, this amount will be curtailed drastically in the near future when DHIA opens a central laboratory in Raleigh. It is assumed that paytesting for industry would involve approximately 100,000 samples per year. This could be absorbed within the present operation on a fee basis with very little expansion. In the long run, the cost to the industry per sample would be reduced.

Response: The Department should propose to undertake all paytesting for farmer milk, thus placing the matter in unbiased hands at a reduced cost per sample analysis.

- g. Problem: Establishment of a viable inspection and sampling program for drugs and cosmetics in North Carolina. Assurance of safe and effective human and animal drugs and cosmetics in North Carolina is vital. Drugs are frequently utilized to either mitigate or cure disease, or to affect the structure or function of the body in some manner. Many drug uses are life-critical situations wherein the affected individual is debilitated, aged, or an infant, and thus more critically sensitive to the effects of adulterated products.

Previously, the Division has been confined because of lack of personnel and expertise to instances involving (1) pharmacy disasters, wherein drugs and cosmetics were damaged to an extent that dictated an inspector being present for segregation and disposal; (2) obvious drug quackery, i.e. baldness cures, body wraps for quick weight reduction, etc.; (3) damaged drugs accumulated by common carriers, i.e. railroads and transit lines; (4) locally-formulated over-the-counter drugs such as topical ointments; and (5) dispensing of certain drugs from vending machines.

Response: To completely fulfill the needs of such a program the Division must possess: (a) the capability of complete good manufacturing practice (GMP) inspections of any and all drug and cosmetic manufacturers, wholesalers, or repackers; (b) a well-equipped laboratory capable of monitoring quality and purity of products; and (c) the expertise for knowledgeable review of drug and cosmetic product labeling.

III. PLAN FOR THE 1975-77 BIENNium

Indicators of Expected Accomplishments

| | <u>71-72</u> | <u>72-73</u> | <u>73-74*</u> | <u>74-75</u> | <u>75-76</u> | <u>76-77</u> |
|-----------------------------------------------------------------------------|--------------|--------------|---------------|--------------|--------------|--------------|
| Number of Inspections | 6,012 | 9,012 | 8,475 | 9,000 | 9,000 | 9,000 |
| Inspection Survey and Complaint Samples Taken | 10,243 | 12,596 | 14,092 | 15,500 | 16,500 | 17,500 |
| Butterfat Checktest | 27,986 | 25,282 | 27,685 | 26,000 | 26,000 | 135,000 |
| DHIA Butterfat Tests | 0 | 54,158 | 71,364 | 80,000 | 48,000 | 65,000 |
| Warning Letters Issued | 290 | 543 | 444 | 450 | 425 | 400 |
| Consumer Complaints Investigated | 67 | 171 | 276 | 300 | 425 | 500 |
| Embargoes | 228 | 408 | 386 | 425 | 450 | 500 |
| Destructions | 129 | 291 | 313 | 325 | 325 | 350 |
| Value of Destroyed Goods | \$421,467 | \$843,446 | \$627,996 | \$700,000 | \$800,000 | \$900,000 |
| Value of Damaged or Misbranded Goods Released for Reconditioning | \$207,318 | \$261,919 | \$119,694 | \$150,000 | \$175,000 | \$200,000 |
| Value of Damaged or Misbranded Goods Released for Use in Animal Feeds | \$ 8,682 | \$ 2,213 | \$ 8,057 | \$ 9,000 | \$ 9,000 | \$ 10,000 |

| | <u>71-72</u> | <u>72-73</u> | <u>73-74*</u> | <u>74-75</u> | <u>75-76</u> | <u>76-77</u> |
|----------------|--------------|--------------|---------------|--------------|--------------|--------------|
| Plant Closures | 57 | 64 | 53 | 60 | 60 | 55 |
| Hearings | ** | ** | 8 | 10 | 12 | 15 |
| Court Cases: | | | | | | |
| Civil | ** | ** | 3 | 4 | 4 | 4 |
| Criminal | ** | ** | 2 | 3 | 3 | 3 |

* 11 Months Figures Shown

** Adequate Records Not Available

The number of inspections will plateau near the peak of 9,012 in 1972-73. This will be attributable to: (a) Performance of more thorough and documented inspections (by reports, samples taken, and photographs) and (b) obligations under federal contracts for FY 74-76 involving inspections of certain food warehouses, bakeries, and bottling plants. The number of samples taken is increasing rapidly, reflecting more adequate documentation of insanitary conditions by inspectors. By 76-77 it is estimated that 75% more samples will be taken and approximately twice the number of analytical determinations will be performed as compared to 1971-72.

Division policy change will likely reduce numbers of warning letters to management, as the intention is not to allow persistent insanitation to carry forth for any length of time. In these cases, hearings and such necessary further actions will be arranged.

Numbers of consumer complaints investigated has more than quadrupled within the past two years, indicating increased awareness of where such complaints should be directed.

Analysis of Major Changes Proposed

a. Stepwise Realignment and Strengthening of Processor-Distributor-Regulatory Control Programs

Wholesale processors or distributors of food will be issued annual operating permits by the Division at a specified fee. Such permits will be liable to suspension until deficiencies are corrected, or for not greater than 10 days (subject to court review) on order of the Commissioner when continuing or flagrant violations are noted. Furthermore, the Commissioner will have authority to levy administrative penalties not to exceed \$500 (subject to court review) for continued or flagrant violations.

Existing good manufacturing practice regulations for bakeries and bottling plants are to be studied and revised within the biennium to reflect those points in the processing operations critical to adulteration, underprocessing, or recontamination, as well as good sanitation in general. Microbiological staff will assist in inspections to ascertain

where finished product or line samples indicate improper procedures. Access to industry process records and formulae will be necessitated.

A spot survey of 250 common carrier vehicles (railcars and tractor trailers) will be performed to ascertain the extent of problems of infestation or adulteration of properly-processed foods during transit.

Approximately 2,000 additional samples of foods (ground beef, soft serve frozen desserts, ready-to-serve frozen convenience foods) from this Division, the Meat and Poultry Inspection Service, and local health department programs will be surveyed each year of the biennium. Data will be applied to establishment of bacterial standards for ground beef and such other foods as deemed necessary.

Additional workshops for industrial personnel similar to the warehouse sanitation seminar sponsored in March, 1974 are to be devised and sponsored by the Division. In order of priority these will include: corn meal millers, bakeries, soft drink bottling plants. It is estimated that one and possibly two workshops can be created and sponsored within the biennium.

Such realignment will necessitate several changes in the State Food, Drug and Cosmetic Act, namely: (1) access to production records and formulae, which information must be protected against release to the public, except upon response to a court order; (2) issuance of annual operating permits at a specific fee to wholesale food processors and distributors; (3) operating permit revocations due to constant or flagrant violations of the Law; and (4) authorities for levying of administrative penalties. Items (3) and (4) would be provided as subject to court review. A major revision of the Food, Drug and Cosmetic Act to incorporate such changes and achieve uniformity with other states and the federal government is anticipated for the 1975 General Assembly.

Such program changes will necessitate the following additional personnel: 5 (1 inspector, 1 chemist, 2 microbiologists, 1 laboratory helper). One of the microbiologist positions will be working with the Meat and Poultry Inspection Program, thus is 50% reimbursable on salary benefits and operation expense.

Benefits: (1) Annual licensing, authority for closure and levying of fines will greatly

facilitate the handling of chronic violators who show little interest in operating a rigidly-sanitary operation. Such individuals may frequently escape accountability for such conditions by virtue of the shortage of manpower for court case preparation in the Division. (2) Access to formulae and production records will facilitate the uncovering of critical process areas which have been overlooked, neglected, or camouflaged by management.

Alternatives: Annual inspection permits, which would only serve the purpose of pinpointing all active firms, were considered. This alternative was rejected since it affords only information, and does not offer solution to management or chronic violators.

b. Monitoring of Agricultural Products for Introduced Chemical Residues

Grain handling establishments in the state will be contacted and stored grain will be sampled. Samples of moldy lots will be forwarded to the laboratories for assay for presence of aflatoxin, zearalenone, and T-2 toxins (mold derived).

Feed ingredients, finished feed, dairy products, peanut butter, and stored nuts (pecans, Brazil nuts, pistachios) would be sampled throughout the calendar year for mold toxins.

The major benefit will be a program which will demonstrate a strong, continuing interest by the State in maintaining residues at acceptably low levels, thereby protecting the consumer. In addition, emphasis will be on locating sources of contamination at the earliest possible point in the economic chain. This will assist producers in minimizing their investments in products that might be hazardous. The proper harvest and storage of grains and nut crops will also be encouraged by the mold toxin assay program.

Since no other state agencies have the authority for such a program, the major effect must be through this Division. Other alternatives considered included: (1) continuance at the present level of assay, which would be zero samples per year being analyzed for mold toxins. Such program does not appear to be serving a state in which between \$1.5 and \$2.0 billion worth of agricultural commodities are produced annually. (2) A requirement for pretesting of grains and commodities by the seller, which was rejected due to the tremendous cost

(ca. \$20 per sample for aflatoxins).

Personnel required: 1 chemical analyst II.

c. (1) Misbranding of Newly-Marketed Imitation and/or Nutritionally-Labeled Foods

(2) Misleading Advertising of Food Products

To ascertain the extent of the problem and more fully document needs, the Division plans to utilize the newly-appointed departmental Consumer Information Specialist to scrutinize local media advertising of food and drug products. It is anticipated that this individual can perform initial screenings of mass advertisements, referring only questionable examples to the FDC compliance officers. Further personnel needs, if any, should be more completely documented for the 1977-79 biennium.

d. Establishment of a Viable Inspection and Sampling Program for Drugs and Cosmetics in North Carolina

The Drug Administrator will train one field inspector for good manufacturing practice (GMP) inspections of drug and cosmetic manufacturers, wholesalers, and repackers. An estimated 100 original inspections of drug and cosmetic firms will be made during each year of the biennium. All records which bear on whether drugs are adulterated or misbranded are to be made available during inspection of prescription drug agents. Such records will likewise be requested, although not required, from agents for over-the-counter drugs. Cosmetic firms will be inspected for good sanitation practices and absence of poisonous or deleterious substances in the manufacturing process. Records will not be requested.

A drug analysis program will be initiated. Samples for this program will involve those necessitated by discovery of discrepancies during inspections, survey of those drugs of critical nature (by virtue of difficulty in manufacturing, new or changed formulations, therapeutic significance, past history), consumer complaints, and those over-the-counter drugs which are the subject of monographs in recognized compendia. An estimated 350 samples in FY 75-76 and 500 during FY 76-77 will be analyzed for strength, purity, identity, and/or sterility.

An estimated 100 product labels per year will be reviewed for discrepancies noted during inspection.

Benefits from the establishment of such a program include: (1) assurance that the manufacturing, storage, and distribution procedures for these commodities include such quality control and sanitation safeguards as are necessary to assure the public confidence; (2) identification of defective batches of products and removal from the market; and (3) determination of the reasons for batch failure and assurance that manufacturing procedures are corrected as necessary.

Personnel required: 3 (1 inspector, 1 chemist, 1 stenographer II).

e. Equipment to Augment Present Food and Drug Laboratory Programs

Maintenance of a well-equipped laboratory is absolutely essential to possession of a balanced capability for performing the gamut of regulatory analyses. New equipment which offers capabilities not present in previous models, or which allows the performance of analyses not previously possible, must constantly be added to keep our laboratory programs abreast of changes. No equipment funds were obtained for FY 74-75; thus, a request approaching \$75,000 will be necessary for the 1975-77 biennium.

PEST CONTROL PROGRAM

The objective of the Pest Control Program is to protect the health, welfare, and safety of the public and to provide a safer, healthier, and more secure environment for man, his plants and animals and other biological assets in North Carolina through regulation of the structural pest control industry, regulation of the use, sale, application, disposal, and registration of pesticides and protection of beneficial plants, plant products, and other biological assets from pests, harmful organisms, and diseases.

This program consists of the Pesticide, Structural Pest, and Plant Protection and Biological Asset Subprograms. These three subprograms were assembled into the Pest Control Program in January, 1974 in an effort to more efficiently utilize the resources available to accomplish related objectives in the broad area of pest control and to properly integrate all activities from the early planning stages through the actual field operations.

Program planning, administration, and evaluation, as well as liaison with the Board of Agriculture, Pesticide Board, Structural Pest Control Committee, and cooperating agencies are handled through the Raleigh based staff. All field operations are channeled through district offices in Goldsboro, Raleigh, and Asheville with specialists and inspectors headquartered throughout the state. After thorough cross-training of field personnel in all phases of program activities, it is desired that a complete integration of the three subprograms can be accomplished through cross-utilization of specialists and inspectors to whatever degree feasible in all field activities. As progress is made toward this goal, the subprograms can gradually be merged into a single program.

PLANT PROTECTION AND BIOLOGICAL ASSET SUBPROGRAM
(BUDGET PAGE F-18)

I. PROGRAM DEFINITION

Purpose

To protect the plants, plant products and other biological assets of North Carolina from biological pollution and the adverse effects of pests, harmful organisms and diseases. Activities of the Plant Protection and Biological Asset Subprogram range across the state's forests and fields in protection and enhancement of ornamental, native and other beneficial plants, as well as beneficial biological organisms, such as honey bees, parasites, predators and diseases of destructive pest species.

Means and Methods Used to Achieve the Purpose

1. Regular surveys are made of the flora and invertebrate fauna of North Carolina in order that accurate records may be maintained of the occurrence, biology, distribution, abundance, and activity of plant pests and biological organisms, both beneficial and harmful to man and his environment. Special surveys are made to detect newly introduced pests, those of quarantine significance and diseases of bees. Faunal record lists are published periodically and identification and informational services are provided for our staff, cooperating scientists, and the general public as a means to accomplish program goals.
2. Plant pest quarantine regulations are imposed as a means of retarding spread of hazardous pests and of limiting distribution of such pests until action can be taken to control, manage, or eradicate them. Areas of known distribution are placed in quarantine status and movement is regulated of articles which present a hazard of spreading the pest in question. Many quarantines are cooperative in nature with other federal and state agencies.
3. Intense management, control and/or eradication programs are often directed against pests of special significance. Chemical, biological, and cultural methods are integrated to suppress, reduce losses, mitigate, or eliminate pests, as is determined, based on economic, ecologic and other factors. Many phases of these activities are cooperative with other state or federal

agencies and citizens. Divisional technical expertise is made available in developing or maintaining pest management or control programs to those desiring or needing such assistance.

4. A beneficial insect laboratory and rearing facility is operated to provide parasites for release as a component in the gypsy moth and other control and mitigation programs. This facility monitors the impact of divisional programs on the biota of an area, evaluates probable impact of proposed actions, and maintains release, distribution, and efficacy records of beneficial organisms released in North Carolina. Many of these activities are cooperative with other state agencies and institutions.
5. Inspections and certifications are major components of this program. Some examples of these are:
 - a. Transit inspections to detect illegal movement of articles from quarantined areas.
 - b. Nursery inspection and certification as to freedom of nursery stock from pests.
 - c. Export inspections and phytosanitary certification issued on commodities meeting pest-free requirements of foreign countries.
 - d. Import and post-entry inspections are made of plant materials and commodities entering our state from foreign countries to detect possible introduction of new or exotic pests.
 - e. Constant monitoring and light trap inspections are made at ports, airports, etc., to enable early detection and exclusion of new pests.
 - f. Vegetable plant inspections to insure that vegetable transplants moving in commercial channels meet the pest free, quality, viability, and varietal labeling requirements of the vegetable plant law and regulations.
 - g. Inspection of honey bee colonies to detect and control bee diseases.
 - h. Inspection and certification of queen bees and bees for shipment or movement to other states.

- i. Inspection of honey bee colonies to diagnose pesticide poisoning and other problems.
 - j. Inspection of laboratory or rearing facilities of those persons bringing pests into the state for scientific study.
6. Public relations and informational components are key factors in implementing and enforcing plant pest and biological organism programs. Plant pest quarantines depend very heavily on public knowledge and cooperation. Assistance is rendered any citizen as requested in such areas as pest control, pollination, beekeeping, identification of problems in production which may be pest related and many related areas.

Administrative Structure

As has been previously mentioned, many aspects of this program are cooperative with federal or state agencies or institutions while other phases are operated strictly within the Pest Control Division. There are three district offices in Asheville, Raleigh and Goldsboro with specialists and inspectors headquartered throughout the State.

History

The Plant Protection and Biological Asset Program had its beginning in the late eighteen hundreds with establishment of the North Carolina Department of Agriculture. Since that time, the program has grown to include:

1. Insect survey of North Carolina, beginning in 1900, involves listing of all species in state, mapping geographical distribution and recording seasonal occurrences.
2. Biological control of pests beginning 1900.
3. Plant pest regulatory aspect beginning in 1906 with regulation of San Jose scale in peach orchards.
4. The Bee and Honey Program beginning in 1916.
5. Interstate plant quarantine beginning in 1927 with the adoption of Japanese Beetle quarantine.
6. Plant pest eradication and transit inspections beginning in 1931 with establishment of phony

peach disease eradication program.

7. Chemical control program beginning in 1940's.
8. Environmental concern in early 1970's and greatly increased commodity movement resulted in renewed emphasis on pest management and biological control resulting in the passage of the Biological Organism Law and establishment of a beneficial insect rearing facility in 1973.

In 1972, the Plant Protection Program began evolving into two separate programs:

1. Plant Protection Program
2. Biological Asset Protection Program

Separation of this program became apparent, at staff level, in the 1974 reorganization.

Statutory Authority

The Plant Protection and Biological Asset Program operates under the following General Statutes of North Carolina:

1. Plant Pest Law, G. S. 106-36 and regulations.
2. Vegetable Plant Law, G. S. 106-31(b), and regulations.
3. Biological Organism Law, G. S. 106-4D.
4. Honey and Bee Law, G. S. 106-22(4), and regulations.

Much of the Plant Protection Program is carried out in cooperation with the USDA, APHIS, and operates cooperatively under certain provisions of federal laws relating to plant pests and their control.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem/Trend: Gypsy moth spread posing serious threat to North Carolina's forests. The gypsy moth is one of the world's most serious forest pests and poses an immediate threat to the forest resources, recreation industry and forested urban communities in North Carolina. Since the

first gypsy moth was detected in our state in 1971 and the first infestation was found in Winston-Salem in 1973, a continued invasion is expected as the generally infested area spreads toward us from Maryland, Pennsylvania and New Jersey. The Agriculture Department is responsible for detection of infestations and control or eradication to retard spread and delay infestation as long as possible.

Gypsy Moth Trap Detections

| <u>Year</u> | <u>No. of Male Moths Trapped</u> | <u>No. of Sites</u> |
|------------------|----------------------------------|---------------------|
| 1971 | 6 | 5 |
| 1972 | 7 | 7 |
| 1973 | 40 | 32 |
| 1974 (projected) | 100 | 85 |

Only male moths are detected in traps since they are baited with a synthetic sex attractant which attracts only male moths.

Response: Expansion of surveillance efforts, utilization of new control techniques, increased equipment, supply and manpower needs and application of necessary controls to eliminate spot infestations and mitigate damage.

- b. Problem/Trend: Pending Federal Noxious Weed Law will require state conformance. Although weeds have long been considered as serious plant pests, there has been little effort, primarily due to lack of technical expertise, to handle weeds by means of quarantine techniques which have been applied to insect and disease pests. There is presently a noxious weed law pending in the U. S. Congress which will provide a mechanism whereby weeds will be so regulated. In order to meet necessary quarantine and interstate movement restrictions, each state will, of necessity, be forced to adopt parallel legislation if such commodities as nursery stock are to be allowed free movement within the United States.

Response: Upon federal adoption, present legislation for consideration by the General Assembly which would bring North Carolina into compliance with Federal Law. Provide investigations, manpower and training necessary to inspect regulated articles for needed certification and to instigate proper weed management systems where needed.

- c. Problem/Trend: Nursery stock inspection - need to raise industry standards and protect purchasers of nursery stock. The multi-million dollar plant nursery industry of North Carolina is in an extremely favorable position to provide plant materials needed for urban and commercial usage throughout the eastern United States. Increased production has been indicated over recent years, but the need for expanded inspections and consumer protection standards have been shown as basic needs to raise industry standards. Nursery regulations were revised in 1973 to enable better services, both to the industry and to the consumer, but authority to deal with viability and similar problems is needed.

| <u>Year</u> | <u>No. of Nurseries</u> | <u>Nursery Dealers</u> | <u>Plant Collectors</u> |
|-------------|-------------------------|------------------------|-------------------------|
| 1968-69 | 1,256 | 698 | -- |
| 1969-70 | 1,364 | 596 | -- |
| 1970-71 | 1,418 | 728 | -- |
| 1971-72 | 1,600 | 1,106 | -- |
| 1972-73 | 1,595 | 1,041 | -- |
| 1973-74 | 1,568 | 1,115 | 182 |

Response: Expanded consumer protection through enforcement of viability standards. Provide increased assistance to nurserymen in their increasingly complex pest control programs.

- d. Problem/Trend: Need for increased certification efforts to maintain a favorable market stance.

As production and marketing of agricultural and forest commodities expands, there is a marked increase in the need for inspection and certification of such materials to allow free movement to other states and nations. These needs are coming at a time when the U. S. Department of Agriculture is decreasing the availability of such services. This decrease is caused by shifts in workload priorities of federal inspection personnel as well as discontinuation of some federal and plant pest quarantines with resultant imposition of more stringent trade barriers on infested states. USDA has recently discontinued quarantine and certification for soybean cyst nematode and sweet potato weevil in our state and decreased efforts on such widespread pests as the white-fringed beetle. Quarantine requirements of other states and nations necessitate inspection and certification of many of our commodities to enable shipment to such states or nations.

Response: Allow sufficient manpower to identify areas infested by specific pests at issue and to provide needed inspections and certifications. Intensify training so as to enable all state inspection personnel to meet requirements of federal phytosanitary certification standards.

- e. Trend: Plant disease survey. At the insistence of the states, a federally sponsored plant disease survey and detection program is currently being developed. Such a program is designed to help reduce major disease outbreaks by providing a means for detection and monitoring disease development in all crops, basic data for effective pest management programs, research leadtime to respond to new pathogens prior to need for control, efficient dissemination of information on crop production and disease forecasting, rapid retrieval of information on disease development in neighboring areas, information for judicious, economical and effective chemical control use, basic information for issuing phytosanitary certification for export of plant materials and inventories and permanent records of disease development as a basis for regulatory, extension, and research programs.

Response: Provide funds to meet anticipated federal cost-sharing requirements as well as manpower to efficiently implement the program.

- f. Problem/Trend: Federal withdrawal of funds for witchweed eradication. Ironically the USDA has been forced to reduce federal expenditures on the witchweed program at a time when technical advances have provided tools for ultimate eradication of this parasitic plant from this hemisphere. Witchweed was discovered in North Carolina in 1956 and has been limited through stringent quarantines and effective herbicide controls to adjacent areas in North and South Carolina. This parasite only attacks a few members of the grass family, including corn, sorghum and sugarcane, but is capable of reducing corn yields 85 percent if uncontrolled. Each plant is capable of producing one-half million seed which can remain dormant in soil for at least 20 years and will only germinate when a host root induces such germination. A cheap, efficient and safe artificial germination stimulant has been discovered which can be injected into the soil causing the witchweed seed to germinate and ultimately die from lack of a host plant. Federal budget cuts and inflation have created major problems with effective utilization of this simple technique in the witchweed program while

creating the possibility of spread of the pest to uninfested areas.

Federal Witchweed Expenditures in Millions of Dollars

| <u>1966</u> | <u>1967</u> | <u>1968</u> | <u>1969</u> | <u>1970</u> | <u>1971</u> | <u>1972</u> | <u>1973</u> | <u>1974</u> |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 3.20 | 3.24 | 3.24 | 3.30 | 2.83 | 2.93 | 2.55 | 2.43 | 2.40 |

Response: By injection of state funding into the cooperative witchweed program, definite progress can be made toward eradication. Eradication would be extremely beneficial to all affected producers in the several counties presently infested since stringent regulations are currently enforced to prevent spread of witchweed.

- g. Trend: Need for an accelerated boll weevil eradication program in North Carolina. Since about 1920, the boll weevil has been the most important limiting factor in cotton production in North Carolina. Besides actual damage to the crop, the weevil has created severe environmental problems due to the vast quantities of insecticides used in its control. Following the pilot eradication trials in the Mississippi area, it has been determined that further eradication trials are in order and that such efforts should be initiated in the Virginia-North Carolina end of the cotton belt where boll weevil devastation is greatest and where grower support is strongest. Federal enabling legislation has been approved by Congress and funding for the project is the last major hurdle. Efforts are now under way by cotton producers and other groups to secure \$5 million in federal funds to be matched by grower funds for the three-year initial program. Program implementation would require major participation from the Pest Control Division in several regulatory and support aspects of the effort.

Response: Provide needed regulatory authority and funding necessary to implement this phase of the operation.

- h. Problem: Pesticides for regulatory uses. As the federal pesticide regulation is made more stringent by the adoption of additional requirements by the U. S. Environmental Protection Agency, there is less incentive for private industry to test and register pesticides for uses where they can expect very little monetary return. This is the case with many pesticides currently needed and which will, in the future, be needed in plant

pest regulatory programs. At present there appears to be no mechanism whereby such needs will be met.

Response: Provide expanded technical expertise, proper equipment and needed funds to allow testing and registration of pesticides for plant pest regulatory programs by divisional personnel.

- i. Problem: Pest Control Compact. Due to the costly and complex nature of control of infestations or reinfestations of plant pests across state lines, the Council of State Governments has assisted in development of interstate machinery for pooling of the resources of several states to combat such problems. The Pest Control Compact was established with membership offered to all states and an insurance fund to be used to accomplish desired objectives. The Compact is now administered by the National Association of State Departments of Agriculture and is of definite benefit to such states as North Carolina with strong plant protection programs. Such neighboring states as Virginia, West Virginia, Tennessee, and South Carolina are currently members.

Response: Present proposed enabling legislation to the General Assembly along with request for payment into the insurance fund.

- j. Problem: Unpredictable pest outbreaks. Due to the unpredictable nature of pest outbreaks and the devastating potential inherent in such situations, there is distinct need for a mechanism whereby needed action can be immediately instigated. By prompt and decisive action, it is highly possible that millions of dollars and many years of work can be saved through eradication of newly detected infestations of plant pests or by damping off a potentially explosive outbreak.

Response: Request emergency and contingency funds which can be immediately available if needed to combat plant pests.

- k. Problem/Trend: Public demand for relief from fire ant and Japanese beetle. The imported fire ant is becoming established in North Carolina over increasing areas. The demand for assistance from the public in control of this pest is increasing correspondingly. There is a need to give the public assistance in the control of all quarantined pests after they have gotten

established and become a problem.

Response: Provide increased information and assistance to the public in control of these pests. Investigate biological and other non-chemical methods of control.

1. Problem/Trend: Shortages of honey bees and beneficial organisms and the need for their protection and enhancement. Factors such as growing urbanization, use of pesticides, destruction of nesting sites, and introduction of foreign pests that have left their native natural enemies behind is causing a shortage of beneficial organisms in North Carolina. Shortages of pollinating insects have caused a demand for honey bee pollination in apple, blueberry, and cucumber crops. There is a need to introduce parasites, predators, and diseases to control imported pests, such as the Japanese beetle and gypsy moth, on a long term biological basis.

Two new honey bee pests (Chalkbrood, a disease probably introduced from Europe and the Brazilian bee, a vicious strain of bee, introduced into South America from Africa) are moving toward North Carolina and have the potential for drastically damaging beekeeping in North Carolina. There is a trend to fewer and fewer available plants from which bees can produce honey in North Carolina and our already low average honey production per colony will get lower. The increased killing of honey bees by pesticides demonstrates the damage pesticides are causing our total beneficial insect population.

Response: Combine operations of our bee and honey and beneficial organism rearing programs. Establish a permanent beneficial organism rearing facility. Increase apiary inspection force and biological staff including an ecologist to direct biological asset enhancement program.

Provide honey bee registration, beekeeper pesticide advocate, bioassay, and diagnostic services to protect honey bees (and other beneficial insects) from misuse of pesticides. Promulgate quarantines to protect our honey bees from the introduction of new pests. Promote conservation

and planting of honey plants and investigate suitability of possible new honey plants for North Carolina.

- m. Problem/Trend: Increased need for biological and integrated control information and supportive assistance. The current period of environmental awareness has brought on an increasing demand for biological information from our biological section. The preparation of environmental impact statements, licensing of applicators, processing of light trap collections, our parasite predator rearing program, restrictions on pesticide usage and implementation of integrated control and pest management programs are a few of the new and future developments that are placing additional demands for information and assistance from our Biological Section.

Our insect and near insect collection and survey already has a heavier workload than can be handled with the present staff, resulting in lowered quality of service.

There are widespread misidentifications of pests and unneeded pesticide usages (even among professionals) due to ignorance or to incomplete biological information. The Pest Control Division needs to assist applicators by providing information to enable them to operate in a biologically and legally sound manner. The Division will be called on to cooperate in cooperative integrated control and pest management programs.

The use of computer techniques, biometric, and statistical methods by our cooperators in making decisions of major importance has created the problem of our cooperatively assessing policies without the needed expertise on our part.

Response: Make additions to staff including a taxonomist-curator for the insect and arthropod collection and an ecologist. Establish a joint facility with North Carolina State University and other interested organizations to house the state insect and other biological collections. Computerize our biological data. Expand our training and information service to the public and pest control professionals. Strengthen our early detection light trap and survey programs. Cooperate more fully in cooperative integrated control and pest management programs.

III. PLAN FOR THE 1975-77 BIENNIUM

The Plant Protection and Biological Asset Subprogram expects to accomplish much as a direct result of the reorganization into the Pest Control Division, along with Pesticide Regulation and Structural Pest Control. We expect a brief leveling off of services at the beginning of the biennium as our staff receives training for cross utilization of work and gains experience in the new operation. However, as we benefit from management and planning from higher levels, and gain expertise in cross utilization of work, we expect our overall efficiency to greatly increase.

The following statistical summary indicates our expected accomplishments:

Indicators of Expected Accomplishments

| | <u>1972-73</u> | <u>1973-74</u> | <u>1974-75</u> | <u>1975-76</u> | <u>1976-77</u> |
|----------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Acres Surveyed for Witchweed | 550,051 | 398,366 | 490,512 | 500,000 | 500,000 |
| New Acres Found Infested with Witchweed | 9,447 | 2,786 | 2,500 | 2,000 | 2,000 |
| Acres Surveyed for Imported Fire Ant | 243,149 | 275,300 | 290,000 | 300,000 | 300,500 |
| Acres Found Infested I.F.A. | 75,005 | 85,000 | 90,000 | 95,000 | 100,000 |
| Bushels Sweet Potatoes Inspected for Sweet Potato Weevil | 167,151 | 180,000 | 185,000 | 189,000 | 200,000 |
| Gypsy Moth Traps Serviced | 5,200 | 5,690 | 6,500 | 7,000 | 8,000 |
| Number Male Moths Trapped | 7 | 40 | 85 | 150 | 300 |
| New Species Insects Added to N. C. Insect Survey List | 100 | 946 | 1,000 | 1,000 | 500 |

| | <u>1972-73</u> | <u>1973-74</u> | <u>1974-75</u> | <u>1975-76</u> | <u>1976-77</u> |
|--------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Light Trap Survey Specimens Examined | 2,000 | 2,000 | 10,000 | 10,000 | 10,000 |
| Honey Bee Colonies Inspected | 10,232 | 11,000 | 11,000 | 14,000 | 14,000 |
| Percent American Foulbrood Disease of Bees | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |

Pest Control Treatments Conducted:

Pesticides:

| | | | | | |
|---------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|
| Acres Treated with Herbicide for Witchweed | 199,892 | 170,781 | 70,000 | 100,000 | 100,000 |
| Imported Fire Ant Mounds Treated | 1,189,275 | 1,500,000 | 1,175,000 | 1,190,000 | 2,000,000 |
| Acres Treated with Pesticide for Gypsy Moth Eradication | -- | 350 | 3,000 | 5,000 | 8,000 |
| Nurseries Receiving Certification Treatments | 210 | 250 | 300 | 330 | 400 |

Pest Control Treatments Conducted:

Biological Agents:

| | | | | | |
|---------------------------------------------------------|-------|--------|--------|---------|---------|
| Acres Treated with Ethylene for Witchweed Control | 191 | 10,000 | 12,000 | 15,000 | 20,000 |
| Acres Treated with Sex Pheromone for Gypsy Moth Control | -- | 300 | 600 | 1,000 | 2,000 |
| Number Parasites Released for Gypsy Moth Control | 9,285 | 64,735 | 75,000 | 100,000 | 150,000 |
| Parasites Released for Cereal Leaf Beetle Control | -- | -- | -- | -- | 100,000 |
| Japanese Beetle Control Milky Spore Disease Treatments | -- | -- | -- | 100 | 250 |

Inspections and Certifications:

| | <u>1972-73</u> | <u>1973-74</u> | <u>1974-75</u> | <u>1975-76</u> | <u>1976-77</u> |
|--------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Transit Inspections Made | 1,794 | 2,050 | 3,000 | 3,500 | 4,000 |
| Nurseries and Dealers Certified | 2,636 | 2,800 | 2,900 | 3,100 | 3,300 |
| Export Phytosanitary Import Postentry Inspections Made | 752 | 850 | 910 | 1,000 | 1,200 |
| Vegetable Plants Inspected | 1,100,500 | 1,500,000 | 1,700,000 | 1,800,000 | |
| Bee Colonies Inspected for Pesticide Poisoning | 1,281 | 1,200 | 1,000 | 1,000 | 1,000 |
| Plants Inspected for Shipment | 434,743 | 459,200 | 490,300 | 500,000 | 525,000 |

Service and Support Activities:

| | | | | | |
|--------------------------------------------------|-------|-------|-------|-------|-------|
| Identifications (Insects, Plant Disease, Plants) | 1,200 | 3,000 | 3,500 | 5,000 | 5,000 |
| Pest Control Recommendations | 1,000 | 1,500 | 2,500 | 3,000 | 3,000 |

The statistics here reflect in a limited way the achievement of this subprogram's goals. A very high percentage of our plant and biological asset protection activities cannot be measured statistically.

During the 1975-77 biennium, we plan to use the full resources or support of the entire Pest Control Division in accomplishing our purpose. Our staff is being trained for cross utilization of duties. We are developing a beneficial insect protection organization from our bee and honey and parasite and predator rearing organizations. We plan to expand our apiary inspection operations. We plan to use the latest available techniques such as sex pheromones and seed germination stimulants in our control program. We plan to construct and make our greenhouse facilities operative. We plan to promulgate regulations under the biological organism law

designed to protect and enhance our biological assets. We plan to begin preliminary work toward the goals of cooperating in the Interstate Pest Control Compact, developing a noxious weed regulation program, and cooperating in a boll weevil eradication program during this biennium.

We plan to organize our identification and survey work for increased efficiency and effectiveness and extend and broaden the base of service to a larger percentage of our citizens.

Analysis of Major Changes Proposed

a. Cotton Boll Weevil Eradication Program

The boll weevil exists as the most serious insect pest of cotton in North Carolina and is the major limiting factor in its production. The technology now exists to eliminate this pest from the state. The boll weevil has developed resistance to many of the chemicals which formerly were used for control. Chemicals that are still effective against this insect face even greater restriction because of environmental effects created and human safety aspects. Approximately thirty percent of the pesticides used in the United States are applied to cotton. All of the major commercial cotton acreage in North Carolina has to be treated with chemical insecticides to control this pest. A minimum of two applications are required and range as high as twenty-five; costs range from a minimum of \$10 per acre to \$75 per acre. To eradicate this pest, authority to force mandatory compliance with plant pest regulations from all cotton producers is a necessity because if one farm or one field is left untreated, this pest, due to its tremendous reproduction potential, can reinfest the entire state.

The eradication of the boll weevil in North Carolina would be part of a national scheme in cooperation with the United States Department of Agriculture, to eliminate this pest from its present range extending from southern Virginia to Texas and Mexico. It is recognized that this undertaking would be too large to execute a series of management techniques across the cotton belt at the same time. Therefore, it is proposed that these suppression measures be applied to designated zones successively across the cotton belt with North Carolina being the major portion of the first

zone. With program initiation in 1975, the sequence of events would be that cotton growers would be urged to conduct a diapause control program in the fall of 1974. Then in the spring of 1975 program operations would begin and continue through 1977 with mop up operations as needed. Techniques employed would be:

1. Mandatory inseason control under contract.
2. Mandatory diapause program.
3. Use of pheromone traps.
4. Trap crops.
5. Destruction of alternate host plants.
6. Continuous inseason survey.
7. Release of sterile insects.
8. The necessary regulatory actions governing movement of seed cotton and equipment which offer a hazard of transporting the boll weevil.

Funding for this program would be as outlined in the Federal Farm Bill passed in 1973 which authorized federal participation in this project. Cotton producers are required to contribute as much as 50 percent of the total program costs with USDA and the state involved contributing the remaining funds. Farmer assessments would be collected by county ASCS offices.

By eliminating the boll weevil, North Carolina cotton farmers would be spared the costs associated with controlling this pest, per acre yields would increase, complex problems based on the resistance of the insect to insecticides would be eliminated, and far less pesticides would be released into the environment. More practical past management systems could be applied to the other pests of cotton if the boll weevil were removed as the significant factor in production. We could make cotton a more viable factor in the agricultural income in North Carolina.

A Boll Weevil Eradication enabling law would need to be passed by the legislature. This law should give the Board of Agriculture the authority to adopt regulations to enforce compliance with the purpose of the law. Major elements of this law should include:

1. Mandatory compliance by all cotton producers on all cotton acreage in the state.
2. Quarantine authority.
3. Access and entry authority.

One Entomologist I would be necessary to coordinate all field regulatory activities associated with the program. Four plant pest inspectors would be necessary, stationed strategically throughout the cotton growing areas of the state to carry out all regulatory, survey and monitoring activities. Regulatory measures would include airplane contract administration, large area mapping of cotton field locations, installing survey and control traps, insect scout supervision, checking on farmer non-compliance, surveys for alternate host locations, destruction of alternate host material, and certification of regulated articles. Monitoring activities would consist of checking on the proper rate of chemical application, studies to determine if environmental elements are properly protected, and human blood sampling for insect scouts to insure against over exposure to pesticides. Support services such as offices, telephones, vehicles, etc., would be required. Additional technical state staff support for program planning and coordination would also be required. The annual cost of this program would be approximately \$95,000. One solution to the current boll weevil pest problem is to continue present farming practices without any change. It is a scientifically accepted fact that the boll weevil builds resistance to chemical control measures and each succeeding year more pesticides at higher dosages are required to control the pest. Other types of non-chemical controls are not effective by themselves and other types of control are not anywhere in the immediate future. When the boll weevil first invaded North Carolina, this state was one of the major cotton producing states in the southeast. The boll weevil eliminated cotton production in the state until the advent

of effective chemical controls. These chemical controls are being threatened by insect resistance and environmental legislation. To attempt a boll weevil eradication program at this point in time would relieve environmental pressures and decrease cost and production pressures on cotton farming operations. For cotton production to remain a viable part of the North Carolina agricultural economy, this program needs to be initiated.

b. Pest Control Compact

Even though plant pests do extensive damage to America's agricultural and forest crops and products and even though there is existing capability to adequately provide effective control, suppression or eradication, we are generally not successful in curtailing staggering losses due to the mobility of these plant pests and our lack of concerted effort by all parties necessary. The USDA has funding available for meeting many plant pest needs in preventing spread or establishment, but these available funds are often not expended because of inability of states or local governments to match their efforts on the intrastate level. There are also situations where pests may be of minor importance in areas where they presently occur and where action against them would be most effective, but such pests may be potentially devastating if they were to spread to other states where economically important hosts or other situations are of a different nature.

As developed and recommended through the Council of State Governments, the Interstate Pest Control Compact provides protection through a mutuality of arrangements whereby each state, having an interest in being protected against infestations in other states, subscribes to an insurance fund. Member states appropriate funds to the insurance fund based on the value of that state's agricultural and forest products. If each of the fifty states becomes a member the total insurance fund would consist of one million dollars. The assessment for membership by North Carolina would be \$35,300. Through membership in the compact, a state such as North Carolina, with a strong plant protection program would be insured against the likelihood that situations could develop outside her jurisdictional boundaries which could seriously jeopardize her crop or forest

production. North Carolina, though not presently a member, has already benefited twice through expenditure of compact funds to retard gypsy moth spread and to eradicate a golden nematode infestation in Delaware. At least four of our neighboring states are compact members.

Membership in the Interstate Pest Control Compact would require the adoption of enabling legislation by the General Assembly. A model enabling act was developed by the Council of State Governments and is available for introduction. Arrangements can be made whereby appropriate "premiums" to the insurance fund can be spread over several years, but it is desirable that the entire assessment of \$35,300 be paid upon adoption by the General Assembly of the enabling legislation.

Membership in the compact implies that a state will not lessen its activities against plant pests, but will maintain a vigorous program. The compact would be ineffective if member states failed to continue such activities. This is not to imply that present plant pest programs and priorities would not continually be evaluated and reordered, but there is an obligation not to jeopardize other states through curtailment of activities related to compact membership. There is no alternative plan available which is designed to accomplish these objectives. The only alternative is to remain outside the compact and attempt to accomplish the objectives through requesting individual actions by other states. It is highly unlikely that neighboring states would be sympathetic to our requests since they have joined the compact to provide a means for protecting their crop and forest products.

c. Contingency and Emergency Fund for Plant Pest Programs

By their very nature and throughout man's recorded history, outbreaks of plant pests have been very sporadic and frequently strike without warning. They have often been as devastating as they are unpredictable. The formal budgeting process requires careful planning of financial requirements and necessary outlays which are virtually impossible where biological phenomena such as this are controlled by many environmental conditions beyond the predictive capabilities of man with his current technical ability; yet in

order to prevent or mitigate the activities of such pests, we must be able to muster the necessary resources to take immediate and decisive remedial action. Several times in recent years it has been necessary to request emergency funds from the Council of State to combat unpredictably large outbreaks of plant pests such as the imported fire ant, the gypsy moth or the sweetpotato weevil. Our ongoing survey, detection, and exclusion programs may, at any time, detect the presence of potentially devastating pests which require action, or such situations may not occur over a period of many years.

An appropriation in an operating budget does not appear to be as satisfactory a solution as does a specified sum of up to \$250,000 to be allotted out of the Contingency and Emergency Appropriation at the recommendation of the Director of the Budget upon the request of the Department of Agriculture for use against unpredictable plant pest outbreaks. Through use of this funding technique, needed monies would be available to offset potentially damaging plant pest situations when such conditions arise, but would not have to be appropriated into specific line items in an operating budget. Needed flexibility would be obtained without unnecessary expenditure. Section 21 of the budget for the 1974-75 fiscal year recommends such a mechanism for witchweed control and/or hog cholera indemnities. This recommended funding level could be increased to \$250,000 and reworded to include use against any plant pest outbreak requiring emergency or contingency funding.

Without a proper mechanism for dealing with emergencies involving plant pests, there is the great potential danger that pests such as the Japanese Beetle, Gypsy Moth, Southern Corn Leaf Blight, Chestnut Blight or others would become firmly established or even have destroyed their host species before sufficient funds could be obtained to eradicate or mitigate them. Due to the present day volume of world trade and travel, it is not inconceivable to expect that any one of thousands of potentially devastating exotic pests or diseases could be introduced into North Carolina at any time.

There would be no legislative or administrative changes needed nor would this program effect

changes on other programs or support services.

d. Need for Environmental Protection of Our Beneficial Insects and Other Biological Assets

A staff ecologist is needed to help with the following problems:

1. The need to enforce the ecological provisions of our plant pest and biological organism law and regulations.
2. The need to cooperate in and monitor pest management programs in North Carolina.
3. The need to utilize the facilities of our beneficial insect laboratory and cooperative greenhouse in integrating parasites, predators' pheromones and other biological control and management tools and techniques into the control programs for pests such as the gypsy moth, Japanese beetle, imported fire ant, etc.
4. The need to work with beekeepers, landowners, and others interested in reducing the serious losses of beneficial insects and pollinators in our state. A positive approach will be taken by releasing certain beneficial insects into our environment, working to encourage nectar producing plants for bees, suitable habitat for beneficial insects, monitoring pesticide usages, and making recommendations to the Pesticide Board with respect to the protection of our beneficial organisms.
5. The need for monitoring the effects of our plant pest regulatory control programs with respect to biological organisms.
6. The need for surveying areas where biological cultures have been imported for scientific study to ensure early detection and eradication of those that may escape.
7. The need to make identifications and control recommendations as a service to the public and other agencies.

8. The need to process collections made in our cooperative state - USDA light trap surveys for early detection of new or exotic pests. The discontinuance of the use of long residual insecticides such as DDT and dieldrin as protective barriers around ports, international airports, etc. has created an increased problem in preventing the introduction of new pests through international traffic. Light trap surveillance is one of our chief tools in solving this problem.
9. The need to supply biological information in response to the many requests received, and the need to assemble and make available control and biological information designed to reduce ill conceived pesticide usage.
10. The need to record and advise the public of time of first appearance, egg laying, threshold levels, and other information needed in integrated control of pests.
11. The need to keep records of distribution and abundance of pest and beneficial organisms that occur outside North Carolina having the potential of being moved into and established in our state. At least 50 percent of our pests are imported and there are many more threatening to enter of which we must be aware.

Benefits of this program will include maintaining and enhancing our environmental quality through use of our biological assets and their protection. Our total pest control programs will be improved and strengthened by the inclusion of biological control and sound ecological management techniques plus other developments in pest control technology into our total program. Biological programs will be developed to assist the public in the control of quarantined pests that have become established and a problem. The trend toward reduction of pollinators and other beneficial insects in our environment will be slowed or reversed. Our beneficial insects and other biological assets will be protected from careless or indiscriminate use of pesticides. There will be less chance of serious pests imported for scientific study escaping and becoming established in our state.

There will be full expeditious availability and usage of our insect and arthropod survey by all citizens including students, pest control professionals, those preparing environmental impact statements, and scientists. Our training and information service will be expanded to enable citizens to more intelligently conduct their pest control operations. Our staff will have more time to devote to making taxonomically and legally sound identifications on which our regulatory operations are based. Our staff will have more early detection and distribution information available in order to take prompt action against new pests and to import beneficial organisms. We will cooperate with a broader segment of the scientific community thus increasing our pest control capability considerably.

The annual cost of this change will be \$29,000 to cover salary, travel expenses, telephone expenses, supplies and materials, a four-wheel drive vehicle, and miscellaneous equipment.

No legislative changes are needed other than adoption of rules and regulations under the biological organism law and routine regulation changes under the plant pest law. This program, though highly cooperative with other state agencies, will require no support services, per se, in order to be initiated. The other sections of the Pest Control Division will receive more adequate biological and ecological support.

The only alternative considered, which is not a solution, is to continue as we are now, doing what is most demanding and letting other duties go undone at the expense of the total pest control program in North Carolina.

This position is being requested with the idea of adding a taxonomist in the future to assume and expand some of the taxonomic and information phases of the work when facilities become available. We request that the State Museum be funded and authorized to provide facilities for our State Insect and Near Insect Collection.

e. Need for Additional Technical Support in Plant Pest Program

A staff entomologist is needed to help with the following problems:

1. The need to assist in preparation of environmental impact statements, applying for EPA exemptions, etc. which are prerequisites to the Division's Pest Control operations.
2. The need to initiate and cooperate in special surveys for new pests such as the gypsy moth, cereal leaf beetle, and imported fire ant which are threatening our state.
3. The need to train division personnel in proper survey methods, compilation of data, etc.
4. The need to review and critically appraise the statistical biometrical techniques now being utilized by our USDA cooperators in surveying for pests, determining infestations, and promulgating or removing quarantines.
5. The need to carry out an insect detection and forecast system in cooperation with the USDA and other states.
6. The need for monitoring the effects of our insect plant pest regulatory control programs.
7. The need to survey post entry sites where plants have been imported and to screen post entry requests for possible hazards involved before approval is granted.
8. The need to assist in plant pest program planning and execution at the state level. This person would review all data available on specific plant pest situations and make recommendations as to pest potential, control agents available or control techniques which could be applied, etc.
9. The need to make field identifications of insects for pest control programs and aid our professional entomologists and USDA cooperators with identifications that are taxonomically and legally sound.

The addition of a staff entomologist will

round out our plant protection staff to include specialization in horticulture and crop production, plant pathology and entomology. The change will benefit the program by providing the additional staff needed to process and review the seemingly endless rules, environmental impact statements, requests for emergency exemptions, and preparation of evidence and data for hearings now being required by the EPA as a prerequisite to the performance of our plant pest control functions.

Our program will benefit by having the needed statistical and biometric expertise now required in planning and determining policy for our cooperative USDA plant pest programs. There will be greater coordination between our staff and field personnel in the areas of training, monitoring, survey for pests, and setting up control programs.

The annual costs of this change will be \$25,000 to cover salary, travel expense, telephone expenses, supplies and material, and miscellaneous equipment. No legislative changes are needed for the implementation of this program change. Additional regulations under the North Carolina Plant Pest Law may be suggested as a result of activities of this program. This program change will strengthen present plant protection activities and provide additional support for the future requirements. There is no alternative solution available to meet present needs and future requirements if Plant Protection's activities are to meet the needs of our citizens.

f. Need for Additional Field Inspections and Support Facilities

The Entomologist I is needed to improve our total plant inspection program and to assume some of our developing workload increases as follows:

1. The need to increase nursery inspections from a minimal once annual to twice annual inspections and make more frequent nursery dealer contacts.
2. The need to meet the additional workload since our inspectors will be authorized to make federal phytosanitary export inspections and issue federal certificates as they are now doing with state certificates.

3. The need to assist in additional vegetable plant inspections that will be necessary because of addition of white potatoes to our inspection requirements, and to insure that the increasing volume of vegetable transplants meets the newly adopted standards of quality, pest and disease freedom.
4. The need to meet increased soybean cyst nematode inspection and regulatory activity which has become necessary due to the Dominion of Canada and several states placing stringent regulations on certain articles shipped from soybean cyst nematode infested states as a result of the cessation of regulatory activities by the USDA in this program.
5. During the past two years, PVY, a serious disease of tobacco, has been brought into North Carolina on vegetable plants and is reaching alarming proportions. The inspections and survey for this disease needs to be increased. Our entire tobacco industry will benefit if we can keep this disease from getting established and overwintering in North Carolina.
6. The fumigation and fogging of all types of structures for structural pests and other types of pests is one of the fastest growing areas of pest control. It is estimated that over four thousand such operations were performed during the fiscal year 1974. These operations are expensive and hazardous. The present rules and regulations of the Pest Control Division contain the statutory authority to regulate such operations but manpower limitations and specialized training requirements have made enforcement of these provisions virtually impossible. It is essential that an Entomologist with specialized training in these areas be available to serve the citizens of our state to insure that proper safety precautions are observed during these operations, that dosage rates are correct, and that the actual need exists to perform an operation of this type.

Storage facilities are needed in Raleigh and our three district offices. We need three trucks and three mist blowers as well as three trailers

to transport our three tractors which are used in plant pest programs. These are needed to give each of our districts a greater pest control capability. Our districts need permanent office space and telephone answering devices for personnel. Additional secretarial assistance is needed in our Western and Central District offices as a result of added responsibilities and divisional reorganization.

The benefits of meeting these needs are: There will be assurance that North Carolina nursery stock and other quarantined articles continue to move freely and be respected as pest free in national and international trade. There will be a saving of much inconvenience to many of our citizens who experience difficulty in obtaining necessary inspections and certifications for shipment or export of plants. The quality of ornamental and vegetable plants sold in North Carolina will be improved and it will prevent our state from becoming a dumping ground for substandard plants. Our homeowners, our agricultural forests and horticultural industry will be saved millions of dollars from pest and disease losses.

The annual costs of these changes will be \$80,000 to cover an Entomologist I salary, travel expense and telephone expense, additional secretarial help, storage facilities in Raleigh, Asheville and Goldsboro; permanent office space and telephone answering service at Wilson, Greensboro, Newland, and Charlotte; three 3/4 ton trucks; three mist blowers and three trailers for hauling presently owned tractors; costs of acquiring land for some of the office facilities; and automobiles for field personnel.

No legislative changes are needed for implementation of this program. Support services will be provided by the Pest Control Division. There are no alternative solutions.

g. Need for Honey Bee Protection

Additional honey bee protection and apiary inspection services are needed to help with the following problems and needs:

1. The need to expand our bee disease survey to include the new imported disease of bee brood called chalkbrood which has recently been found as close as Virginia.

2. The need to help beekeepers solve unanswered problems of fall and spring decline of bees. These conditions are now appearing and bee losses are the greatest when part of our inspection force is not working.
3. The need to provide more inspection service with regard to pesticide poisonings and USDA pesticide indemnity payments, and the need to provide a beekeeper registration service for the protection of bees from aerial application of pesticides.
4. The need to promulgate and enforce quarantines against one bee pest (the Brazilian bee - a vicious strain of bee capable of displacing our honey bee) and chalkbrood (a new disease found in parts of the U. S. - probably introduced from Europe).
5. The need to combat the shortage of insect pollinators in North Carolina.
6. The need to increase honey production in North Carolina through encouragement of better management practices, disease control, and encouraging a honey plant enhancement program in North Carolina.

The benefits associated with this change will be prevention or delay of new bee diseases and pests from becoming established in our state, better solutions to our winter honey bee loss problems, and better protection of honey bees from pesticide damage. A long-range program will be initiated to increase the pollination insect (both honeybee and wild pollinators) populations in our state and to increase honey production through better bee management and honey plant enhancement programs.

The annual cost of the program will be \$5,000 which includes salaries and wages to extend the salaries of our two apiary inspectors from ten months per year to twelve months per year and additional travel expenses.

There will be a need to enact regulations under the Bee and Honey Law (G.S. 106-22 (4)) and the Biological Organism Law (G. S. 106-4D) establishing a quarantine against importation

of the chalkbrood disease and the Brazilian bee and to set up an apiary registration program for beekeepers. Supporting services will be provided by the Pest Control Division. There are no alternative solutions to these problems.

STRUCTURAL PEST SUBPROGRAM (BUDGET PAGE F-31)I. PROGRAM DEFINITIONPurpose

To protect the interests, health, welfare, and safety of the general public by insuring the performance of quality service by the State's structural pest control industry. To safeguard man's property and environment against pesticide pollution by regulating the quality and quantity of pesticides applied by this industry. To promote and encourage professional industry standards and sound business practices and ethics.

Means and Methods Used to Achieve the Purpose

1. Requiring written examination for the certification and licensing of all who practice the structural pest control trade in North Carolina.
2. Registration of employees of license holders to establish identification and job classification.
3. Inspection of pesticide and chemical concentrates, as well as pesticide containers, to ensure that the possession, selection, labeling, usage, and storage of pesticides and their containers are in conformance with the rules and regulations.
4. Inspection of pesticide handling equipment, safety equipment, work records, and contractual agreements to ascertain compliance with the law and rules and regulations.
5. Inspection of properties treated for wood-destroying organisms to determine if treatment was performed in accordance with rules and regulations established by the Structural Pest Control Committee. Drawing and analyzing soil samples from treated jobs to ensure that concentration and dosage of applied pesticide meets state requirements.
6. On-the-spot checks of space and residual spray treatments for household pests to ensure that pesticide is applied by certified operators and under conditions set forth in the Committee rules and regulations.

7. Surveillance and inspection of fumigation operations, including structures and carriers, prior to the release of fumigant(s), during fumigation, and at the time of ventilation.
8. Maintain surveillance to reduce the number of itinerants who operate completely outside the law and to discourage structural pest control activities by fly-by-night operators.
9. Encourage license holders to adopt effective sanitation and other non-pesticidal control measures as a means of pest control prevention.
10. Provide technical assistance and information for the industry and general public.

Administrative Structure

The program is administered by the Chief Structural Pest Officer. This officer serves as Secretary to the Structural Pest Control Committee and is directly responsible to the State Entomologist for carrying out the intent and purposes of this program. Each of the three district offices is in charge of a District Specialist who is responsible for the activities of the inspectors in his district.

History

The Structural Pest Control Program began in 1955 with the enactment of the Structural Pest Control Act. The provisions of the Act provided for the creation of a five-member Structural Pest Control Commission with its members to be appointed by the Governor. The Statute placed the responsibility for the Act and Commission rules and regulations under the Commissioner of Agriculture. The Commission was an independent policy making one without enforcement powers. This created an unwieldy situation, because the Statute did not provide funds for the enforcement of the Act. Amendments to the Statute by the 1967 General Assembly abolished the Commission and created a five-member Structural Pest Control Committee and a Division of Structural Pest Control within the Department of Agriculture. The committee is responsible for making rules and regulations with regard to structural pest control; determining if applicants meet qualifications for licenses; conducting hearings relating to the suspension and revocation of licenses; and to report annually to

the State Board of Agriculture the results of all hearings conducted by the Committee. Re-organization, as recommended by the Governor's Efficiency Study Commission and implemented in 1974, provided for the abolishment of the Structural Pest Control Division and the creation of a new Pest Control Division. All structural pest control functions were placed under this new division. Enforcement of the law and rules and regulations were carried out entirely with fees from 1955 to 1969. The fees have never been sufficient to maintain a rigid enforcement program. The chronological order of changes in the program are as follows:

- 1955 - Structural Pest Control Law enacted; Structural Pest Control Commission created.
- 1957 - Structural Pest Control Law amended; license fees increased.
- 1967 - Structural Pest Control Law amended; Commission abolished; Committee and Division of Structural Pest Control created.
- 1973 - Structural Pest Control Law amended to meet Federal Statute.
- 1974 - Structural Pest Control Division combined with Pesticide Branch and Entomology Division to form new Pest Control Division.

Statutory Authority

G. S. 106-65.22 - Structural Pest Control Act of North Carolina.

G. S. 106-65.23 - Provides for the creation of the North Carolina Structural Pest Control Committee and sets forth duties and responsibilities of the Committee.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem/Trends: Need for acceleration and expansion of the inspection program. Enforcement and regulatory activities of the program have, by necessity, been kept to a bare minimum due to a lack of funds and a very conservative approach to the program. The program is operated primarily on fees generated from licenses, registrations, examinations, and re-inspections, with limited general fund appropriations. Fees provide approximately three-fourths of current operational costs. This program has, therefore, suffered from a lack of personnel, equipment, and needed expertise; and has resulted in concentration on only one area of structural pest control surveillance. In addition, this area

(termite surveillance) is not being adequately enforced due to inefficiencies in the present inspection system and a lack of personnel, equipment, and comprehensive inspection techniques. Less than one-half of one percent of the dwellings treated in the state annually for termites are being inspected. An unacceptable level of sub-standard work (28% total discrepancies with 14% major discrepancies) reflects the need for greater control in this segment of the industry. Acceleration and expansion of termite surveillance could reduce the major discrepancy rate to a more desirable level of less than 10%.

Other areas of structural pest control (fumigation, household pests, and wood-decay fungi) which are covered under the law and rules and regulations are extremely important from the standpoint of consumer protection, but these areas are now being neglected due to a lack of equipment and trained regulatory personnel. For example, it is not unknown for a homeowner to pay three thousand dollars for the fumigation of a pest which could easily have been controlled for twenty-five dollars by the application of a residual spray. Such deceptive practices indicate a lack of public awareness of structural pests and their control and points out the need and urgency for a consumer-oriented education program.

Inadequacies in state pest control laws and rules and regulations across the United States have resulted in a general movement toward increased Federal consumer protection. Industry opposition has always been a major deterrent to the enactment of effective structural pest control legislation in this state. However, failure to bring the state structural pest control law and rules and regulations into conformance with the Federal Statute will result in the inability of the industry to continue operations in North Carolina.

The unfairness of funding and inspection techniques favor the large operator. The present fee structure places an unfair burden on the small operator. His problem is further compounded by a state regulatory inspection system which requires a minimum number of inspections regardless of the volume of work performed by the operator.

The law and rules and regulations can not be properly enforced without the assessment of an adequate penalty fee for offenders. Penalty fees

imposed for the re-inspection of substandard termite jobs have failed to curb the discrepancy rate in treatment of jobs. Violators of fumigation and fogging requirements are not presently assessed penalty fees at all.

The lack of statutory requirements for operator financial responsibility places an unfair burden on the homeowner who suffers substantial losses from improper and inadequate pest control services. The expense, delay, infeasibility of legal action discourages homeowner court action for compensation of damages from such services.

Response: Establish an equitable routine inspection system based on the volume of wood-destroying organisms work performed which will provide more adequate coverage to the industry and allow for additional concentration on the problem operator. Accelerate and expand termite surveillance and inspection to provide more effective consumer protection. Develop and implement wood-decay fungi treating requirements to eliminate poor and faulty service in this area. Adopt a state approved standard contract for all wood-destroying organism work which will reduce the possibility of deceptive practices in this phase of structural pest control. Existing regulations will be modified to require submission of all new wood-destroying organism contracts entered into by each operator. This will result in greater efficiency and better utilization of regulatory personnel. Train regulatory personnel charged with the responsibility for surveillance and inspection of fumigation, fogging, wood-decay fungi, and household pest control work. Initiate surveillance and inspection of these areas of structural pest control work. Develop more comprehensive inspection techniques. Assistance and consultative services will be expanded to the homeowner in the determination of fumigation and fogging requirements. Accelerated efforts will be employed to achieve greater consumer awareness of structural pest control services available to them. Seek legislative changes to require contractual fee, operator financial responsibility and the assessment of stiffer penalty fees.

NOTE: The 1974 General Assembly authorized the appointment of a Legislative Study Committee to review the Structural Pest Control Law and recommend, to the forthcoming General Assembly, changes to bring the law into compliance with the Federal statute.

- b. Problem/Trends: Need for increased professional competencies on the part of the structural pest control industry. The laxity on the part of the industry to make innovations and keep abreast of scientific and technological changes has weakened its professional status. A lack of industry response has resulted in a reduction in the number of university sponsored training programs. The failure of industry to develop and maintain a uniform code of ethics and professional standards has resulted in a lack of the general public's acceptance, confidence, and trust. Many segments of the industry lack the capacity to handle complex pest control problems or deal with routine problems. The inability of service personnel to detect and identify pest problems and select correct control procedures reflects the need for personnel training. The lack of testing programs to effectively measure servicemen's competency to handle pest problems has resulted in substantial losses to the consumers of this state.

The full impact of Federal legislation on this program is unknown at the present time, because certification standards for state licensed structural pest control operators have not been established by the Environmental Protection Agency (EPA). However, the state is required, under the provisions of the Federal Environmental Pesticide Control Act of 1972, to develop a certification plan, by October 21, 1975, for state licensed operators who apply restricted-use pesticides, which is acceptable to EPA. In addition, state licensed operators, as well as regulatory personnel, must comply with the Federal Occupational Safety and Health Act.

The EPA statute places greater emphasis on pesticide labels, pesticide safety, effects of pesticides on the environment, and various other aspects of pest control in which state licensed structural pest control operators are not trained. However, the statute requires the state to assume full responsibility for the training and testing of operators to meet certification requirements and program funding.

Response: Develop and implement intensive training program for state licensed operators and regulatory personnel. Seek legislative change in state statute and amend existing rules and regulations to assure compliance with Federal statutes.

III. PLAN FOR THE 1975-77 BIENNiumIndicators of Expected Accomplishments

| <u>Type of Service</u> | <u>1973-74</u> | <u>1974-75</u> | <u>1975-76</u> | <u>1976-77</u> |
|----------------------------------------------------|----------------|----------------|----------------|----------------|
| No. of wood-destroying insect jobs inspected | 3,035 | 3,488 | 4,011 | 4,613 |
| Percent of jobs with major discrepancies | 14% | 14% | 20% | 19% |
| Percent of jobs with major and minor discrepancies | 28% | 28% | 30% | 29% |
| No. of soil samples tested | 3,462 | 4,154 | 4,985 | 5,882 |
| Percent of jobs deficient | 5% | 5% | 15% | 14% |
| No. of consumer requests examined | 785 | 808 | 832 | 857 |
| No. of persons convicted of violating law | 4 | 5 | 5 | 4 |
| No. of licenses suspended or revoked | 1 | 1 | 2 | 1 |
| No. of fumigation operations checked | 2 | 1 | 50 | 150 |
| Percent of operations not in compliance | 0% | 0% | 5% | 8% |
| No. of fogging operations checked | 0 | 0 | 10 | 25 |
| Percent of operations not in compliance | 0% | 0% | 25% | 26% |
| No. of household pest jobs checked | 2 | 2 | 75 | 125 |
| Percent of jobs not in compliance | 100% | 50% | 55% | 58% |
| No. of wood-decay fungi jobs inspected | 0 | 0 | 150 | 300 |
| Percent of jobs substandard | | | | |

Analysis of Major Changes Proposed

a. Improvement and Expansion of Wood-Destroying Organism Inspection Program

Despite a concentration in the area of termite surveillance, the program serves only a small percentage of the consumers. Since there is an annual increase of six percent in the number of state licensed termite operators, termite work is likely to continue to increase along with an acceleration in demand for consumer services in this area. The unfair burden placed on the small operator and inadequate concentration on problem operators under the current inspection system will be alleviated by the adoption of a more flexible routine inspection system based on the volume of new work performed by the operator. All agreements for the prevention and control of wood-destroying organisms will be on state approved standard contract to reduce unethical and deceptive practices in this area. Contracts will cover a two-year period with guaranteed annual renewal and show location of individual water source. Every operator will be required to submit to the appropriate district office within ten days after the last day of each month a copy of each new contract entered into and performed during the preceding month. The program intends to seek statutory authority to levy a one-dollar fee on each contract. Data collected from the contracts will be used as a quantitative indicator upon which to base future inspections and determine the incidence and distribution of wood-destroying organism infestation.

Research has shown that the most critical area for subterranean termite infestation is within the hidden dirt-filled concrete slab spaces. The program will expand and accelerate its inspection of these areas. It is anticipated that a large percentage of soil samples drawn from these areas will show a deficiency in toxic chemical.

Studies indicate that wood-decay fungi are responsible for fifty percent of the wood-destroying organism damage to homes in this state. The program plans to seek the adoption of state treating standards for the prevention and control of wood-decay organisms which will serve as a basis for inspections in this area. It is anticipated that the state will be required, under the Federal Statute, to strengthen its statutory requirements in this area. Regulation of faulty wood-decay treatments which are currently being performed

in the state will extend the service life of wood and help reduce the drain on wood as a source of building material. Institutions which provide loans on wooden dwellings would benefit by obtaining better protection of their investments.

The assessment of stiffer penalty fees for the re-inspection of substandard wood-destroying organism jobs will improve the quality of work performance and provide better consumer protection.

Expansion and improvement of program services will require additional personnel and equipment. Four additional inspectors will be employed and assigned as follows: one in the western district, one in the eastern district, and two in the central district where the concentration of operators is greatest. Each district will be provided with a set of equipment for inspection of slab areas. An additional secretary will be required to handle the approximately 60,000 contracts which will now be filed with the Raleigh office.

The requirement for additional state funding to support services outlined above is \$67,000 for the first year of the biennium. This money will go for salaries, vehicles, traveling expenses, supplies and equipment.

NOTE: The assessment of wood-destroying contract fees with a corresponding cut in license and registration fees, as requested through legislation introduced this session, will cover \$20,000 of the above stated needs. State funding will be required to cover the full amount if contract fees are not approved.

Despite a decrease in the major substandard job rate from 85% in 1955-56 to 14% in 1973-74, it is anticipated that an expansion of program services will reflect an increase in this rate during the forthcoming biennium. The program's ultimate goal is to reduce this rate to less than 10%. The chemical deficiency rate dropped from 10% in 1963-64 to 5% in 1973-74. It is anticipated that this rate will triple due to an intensification of slab inspections.

Amendments will be proposed to the Structural Pest Control Act to authorize standard contracts, contract reporting, and assessment of penalty and contract fees. The program intends to seek changes in rules and regulations to strengthen the role of regulatory personnel

b. Surveillance of Fumigation and Fogging Operations

Fumigation is a method of structural pest control which is extremely expensive, hazardous, and provides no lasting toxic effects. It is estimated that more than four thousand fumigation and fogging operations are performed in the state annually; however, surveillance and inspection of these operations have been on a very limited basis. It is anticipated that the Federal Statute will require the state to place greater emphasis on the regulation of fumigation and fogging operations.

Accelerated enforcement of these operations will require the submission of advance written notices of fogging and fumigation operations to assure that regulatory personnel are present during these operations. A technical training course will be developed for personnel charged with the responsibility of enforcement of these operations. Due to the complexity, consequence of error, and judgment requirement, the responsibility for enforcement and consultation will be assigned to the District Specialist. Each district will be provided with a set of equipment to perform these services.

It is anticipated that a high percentage of violations will be found in the fogging and fumigation operations checked during the 1975-77 biennium. The real benefit of this surveillance will be to eliminate the hazards before they occur. The program will seek statutory authorization for the assessment of stiff penalty fees for offenders. Additional equipment will be required to perform fogging and fumigation surveillance. This will include gas masks, canisters, respirators, and gas-detecting apparatuses. It is anticipated that an increase in the number of fogging and fumigation operations checked during the second year of the biennium will reflect an increase in violations with a decrease after that time.

The requirement for additional state funding to provide these services is \$4,000.00 per year or \$8,000.00 for the 1975-77 biennium.

The program will seek changes in the state statute and rules and regulations to provide for greater consumer protection in this area.

c. Regulation of Household Pest Control Services

Studies indicate that household pest control services are performed in more than fifty thousand dwellings and business establishments each month in this state. Existing rules and regulations

permit inspection of household pest control operations on a complaint basis only. It is anticipated that the state will be required under the Federal statute to strengthen its statutory requirements in this area.

Routine inspections will be made of rodenticidal bait containers and their placement, residual and space spraying operations, servicemen's kits, application equipment, service vehicles, the labeling, storage, transportation, and use of pesticides.

Cross-training of existing regulatory personnel and the approval of inspectors mentioned in item No. 1 of this plan will eliminate the need for employing additional personnel to perform surveillance and inspection of household pest control services.

It is anticipated that there will be a slight increase in the percentage of violations in this area during the 1975-77 biennium due to an increase in the number of inspections. However, the number of violations should decline after that period as the industry becomes aware of our surveillance activities.

d. Changes in State Law and Rules and Regulations Which Affect the Entire Program

Operator financial responsibility is not required under the provisions of the state statute. The program will seek legislation to require operators to furnish proof of financial responsibility as a prerequisite for licenses.

Amendments will be offered to the law to authorize a fifty percent reduction in the license fee and a seventy-five percent reduction in the registration fee. NOTE: This is contingent upon enactment of legislation to authorize assessment of a wood-destroying organism contract fee.

The program will seek legislation to authorize suspension or revocation of any operator's license who is found guilty of accepting a rebate on a real estate transaction.

Changes will be proposed to rules and regulations to reduce age limit for a licensee from twenty-one years to eighteen years.

PESTICIDE SUBPROGRAM (BUDGET PAGE F-28)I. PROGRAM DEFINITIONPurpose

To insure proper use, application, sale, disposal, storage, quality, and registration of pesticides as required by the North Carolina Pesticide Law of 1971, thereby promoting a safer, healthier, more secure environment.

Means and Methods Used to Achieve the Purpose

1. Registration of all pesticide products marketed in North Carolina. Upon receipt of application and \$25.00 registration fee, product's label is carefully reviewed to assure that the user has available proper direction, precautionary information, hazards, first aid and/or antidote information.
2. Field inspection of marketed pesticides for proper labeling. Sampling for assay at point of manufacture, storage, sale, and use.
3. Pesticide samples are submitted to the Department's Pesticide Laboratory for analysis. Samples taken at the point of manufacture, storage, and sale are analyzed to make certain that the product measures up to the label guarantee, and to ascertain that it is not contaminated. Use and crop samples are analyzed to make sure that the applicator has applied the correct pesticide and that he is following label directions.
4. Stop sale and/or seizure of misbranded or adulterated products and assessment of penalties against deficient products.
5. Establishment of a "restricted-use" list of pesticides; i.e., those materials either so potentially toxic to man or so environmentally contaminative as to preclude use without certain defined restrictions.
6. Testing and licensing of all qualified pesticide dealers, commercial pesticide applicators, and pest control consultants (\$25.00 license fee).
7. Mandatory inspection of all aircraft used for the aerial application of pesticides (\$10.00 inspection fee). Random inspection of ground pesticide

application equipment. These inspections are intended to assure that the equipment can be properly calibrated and is in acceptable working condition.

8. All tanks used for bulk storage of pesticides must, upon inspection, meet required specification before pesticides may be stored in them.
9. Investigate accidents or incidents involving pesticides to determine what steps should be taken to avoid immediate danger to man or the environment and to determine if additional or revised labeling is appropriate.
10. Revocation of product registrations and/or individual licenses for repeated violations of the Law.
11. Drafting or assisting in drafting or revising proposed regulations under the North Carolina Pesticide Law of 1971. Examples: Aerial Application Requirements, Disposal, Restricted-Use Pesticides, Aerial and Ground Applicator Insurance Requirements, allowable deviations from Guaranteed Analysis, etc.
12. Assisting in drafting or responding to proposed regulations under the Federal Environmental Pesticide Control Act of 1972. Examples: Applicator Certification Requirements, Re-entry Standards, Experimental Permits, Classification of Pesticides, State plans, Books and Records, etc.
13. Maintain information and records of the North Carolina Pesticide Board and Pesticide Advisory Committee.

Administrative Structure

The enforcement of the North Carolina Pesticide Law of 1971 and regulations adopted by the North Carolina Pesticide Board, is the responsibility of the Pest Control Division, North Carolina Department of Agriculture. Administrative functions are handled by the pesticide staff while field enforcement is coordinated through Eastern, Central, and Western Regional Offices with inspectors headquartered throughout the state.

The Pesticide Laboratory is responsible for analysis of pesticide samples taken at the point of manufacture, storage, sale, and use. The laboratory administration is under the Food and Drug Protection Division.

The Environmental Protection Agency (EPA), Washington, D. C., has similar responsibilities in pesticide registration, pesticide applicator certification, analysis of pesticides, etc. The Federal Environmental Pesticide Control Act of 1972 will require North Carolina to adopt and implement additional pesticide regulatory activities as various required regulations are adopted by EPA.

We coordinate our testing of applicants (dealer, applicator, consultant) for various licenses with North Carolina State University which is responsible for their training.

History

1947 - North Carolina Insecticide, Fungicide and Rodenticide Act of 1947 (Article 4A, Chapter 106). Required product registration to protect public and legitimate manufacturers. (Repealed 1971)

1953 - North Carolina Crop Dusting Law (G.S. 4B, Chapter 106). Required registration and licensing of aerial contractors and pilots. Liability insurance or bond required. (Repealed 1971)

1971 - North Carolina Pesticide Law of 1971 (Article 52, Chapter 143). (Amended 1973). Contains essential provisions of previously referred-to laws plus provisions for regulating the sale, use, storage, disposal, monitoring, and commercial application of pesticides. Also provides for investigating pesticide incidents or accidents to determine causative factor(s) and provide for elimination of hazards.

The governor-appointed North Carolina Pesticide Board is the governing authority of the North Carolina Pesticide Law of 1971 and rules and regulations established thereunder. The Commissioner of Agriculture is responsible for administering and enforcing the Law and all rules and regulations established by the Board.

Statutory Authority

North Carolina Pesticide Law of 1971 (Article 52, Chapter 143) (Amended 1973).

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Licensing private applicators in North Carolina. Under the North Carolina Pesticide Law of 1971, only commercial applicators (ground and aerial) applying pesticides are required to be licensed.

The Federal Environmental Pesticide Control Act of 1972 requires that all applicators (commercial and private) of federally Restricted-Use pesticides be certified by October 21, 1976.

A private applicator under federal law is essentially any farmer using federally Restricted-Use pesticides.

At the present time the final regulation, which will specify what constitutes certification of applicators, has not been adopted by the Federal Government. However, the present draft indicates that the private applicator will need some training followed by an oral or written examination or its equivalent in order to be certified. In addition, it says that the states are responsible, including funding, for the certification of private applicators. It stipulates that if a state does not certify private applicators, its private applicators will not be able to use Restricted-Use pesticides. Without the use of certain pesticides, which undoubtedly will be federally restricted, economical production of many of North Carolina's major crops will be impossible.

In addition, the Environmental Protection Agency has not designated those pesticides that are to be federally classified as "Restricted-Use". We are, therefore, unable to estimate the number of private applicators to be certified. Based on our present knowledge of the various drafts of criteria that are being considered for classifying pesticides, we would estimate that between 20,000 and 80,000 private applicators will have to be certified under this program.

Response: Seek appropriate legislation and funding to certify our private applicators in conformance with the federal law. The 1974 Session of the N. C. General Assembly authorized a Legislative Study Commission to study the N. C. Pesticide Law of 1971 and recommend any changes which would be necessary to enable conformance with the new federal law.

NOTE: Unestablished definitions of applicator certification and restricted-use pesticides prevents us from developing an appropriate program response at this writing.

- b. Problem: Requests to provide pesticide analysis service. The North Carolina Department of Agriculture currently does not provide the service of analyzing old pesticide formulations. Citizens have requested identification of old products and/or the potency of such products in order to determine appropriate use or disposal.

Response: The adoption of an administrative policy to analyze such samples. Initial support for this program will be achieved internally.

- c. Problem: Inadequate regulatory control of pesticides. It currently takes up to eight weeks to perform analysis of pesticide samples after being assigned to the laboratory due to the necessity to analyze similar pesticide formulations in batches rather than individually or in small groups in order to handle the number of samples currently required to be analyzed. As a result of this delay in analysis, many lots of pesticides which have been sampled and found deficient in active ingredients, adulterated and/or excessive in active ingredients, are sold prior to the time a "Stop Sale Order" can be initiated.

In addition, the increased necessity to analyze pesticide samples by gas-liquid chromatography has resulted in loss of considerable time due to chemists having to wait to use available gas-liquid chromatographs.

The Environmental Protection Agency has recognized the urgency to increase pesticide enforcement by providing 50-50 matching grant funds to increase administrative and laboratory staff, field inspection, and laboratory capabilities in that most states, including North Carolina, are not providing for the amount of inspection, sampling and assay of pesticides to adequately regulate them. In addition, the licensing of 20,000 - 80,000 private applicators will necessitate increased regulatory control in the areas of field inspection, use, and crop sampling in order to more effectively regulate pesticide usage in N. C. and to ensure that all applicators are properly licensed.

To receive such funds, the state must increase inspections and sampling at producer establishments

and at the user level. In that the areas of enforcement in which the EPA is interested are very similar to areas of enforcement which need considerable strengthening in North Carolina, it would be extremely beneficial to North Carolina for the EPA to provide one-half the cost for expanded regulatory efforts in these areas.

Response: Seek \$150,000 State appropriation to match like funds which reportedly will be available from the EPA for the purpose of obtaining additional laboratory supplies and equipment, hiring additional administrative enforcement staff, chemists, pest control inspectors, and clerical personnel.

- d. Problem: Unavailability of funds and trained Emergency Pesticide Team to react to disaster involving pesticides. An emergency involving the burning of a large pesticide warehouse approximately two years ago vividly pointed out the need for funds to obtain local manpower, earth-moving equipment, trucks, etc., for immediate use to impound and dispose of large volumes of pesticide hazardous to man and the environment. A municipal water supply and other adjacent areas would have been seriously contaminated had the warehouse owner not been able to secure the necessary manpower and equipment. Also, an Emergency Pesticide Team equipped and trained to respond and direct emergency operations should be available twenty-four hours a day. The organization of such a team made up of experts from various state agencies will be recommended by the North Carolina Pesticide Board in the near future. The Office of Civil Preparedness recently designated the N. C. Pesticide Board as the agency responsible for handling any emergencies involving pesticides. Should any such emergency arise, the Pesticide Board will work in cooperation with the N. C. Department of Agriculture, the State Board of Health, and the Department of Natural and Economic Resources.

Response: Provide an emergency contingency fund of \$50,000 for securing immediate manpower and equipment to cope with a disaster. Provide funds for training, transportation, equipment, and communication system for Emergency Pesticide Team.

- e. Problem: Excessive workload in registrations. At the present time only two individuals are involved in the registration of pesticides in North Carolina. Registrants begin applying for registration around November 1, and it is a continual process involving deletions and additions through October of next year.

There are approximately 625 manufacturers registering approximately 5,000 pesticide products in North Carolina. The labels for each of these products need to be reviewed thoroughly each year in order to make sure they meet all state and Federal requirements. Due to limited manpower available, a thorough review is not always possible. It currently takes up to four months to clear a pesticide application for registration.

State registration of pesticides should also routinely include examination and approval of pesticide containers as well as physical characteristics (color, odor, etc.) of the pesticide as pointed out by recent investigation of one death and one serious illness. Increased activity in toxicological review of pesticides to be marketed is also urgently needed.

Response: Additional Pesticide Specialists for review of applications for registration must be sought.

III. PLAN FOR THE 1975-77 BIENNIUM

Indicators of Expected Accomplishments

| | <u>1972-73</u> | <u>1973-74</u> | <u>1974-75</u> | <u>1975-76</u> | <u>1976-77</u> |
|--------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Pesticide Product Registrations | 4,420 | 4,500 | 4,800 | 5,000 | 5,000 |
| Inspections | 1,873 | 2,000 | 2,400 | 3,000 | 3,600 |
| Formulations, Sampled and Analyzed | 1,231 | 1,300 | 1,300 | 1,600 | 2,300 |
| Use (Tank Mix), Sampled and Analyzed | - | 92 | 120 | 300 | 400 |
| Crop Use, Sampled and Analyzed | - | 150 | 150 | 250 | 300 |
| Producer-Establishment, Sampled/Analyzed | - | 10 | 60 | 200 | 300 |
| Accident Investigations | 10 | 40 | 75 | 125 | 175 |
| Accident Investigations Involving Samples and Analyses | 5 | 33 | 50 | 100 | 125 |
| Total Analytical Determinations | 3,007 | 3,000 | 3,000 | 3,600 | 4,500 |

| | <u>1972-73</u> | <u>1973-74</u> | <u>1974-75</u> | <u>1975-76</u> | <u>1976-77</u> |
|----------------------------------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| Product Lots Removed from Sale (Misbranded, Adulterated, Deficient, Not Registered) | 183 | 240 | 250 | 265 | 275 |
| Number of Penalties Assessed Against Deficient or Delinquently Registered Products | 155 | 185 | 185 | 200 | 225 |
| Licenses: | | | | | |
| Commercial and Governmental Aerial Applicators | 93 | 100 | 110 | 110 | 110 |
| Commercial and Governmental Ground Applicators | 334 | 600 | 1,000 | 1,100 | 1,100 |
| Pesticide Dealers | 1,359 | 1,500 | 1,550 | 1,600 | 1,600 |

Depending on recommendations of the North Carolina Pesticide and Structural Pest Study Commission and the resulting legislation and funding approved by the 1975 General Assembly, 20,000 - 80,000 farmers would be tested and certified if federally required expertise is demonstrated during 1976-77 (See Plan for the 1975-77 Biennium, Section A).

Field Enforcement of proper use of pesticides will be provided.

Provide for more specific analyses of active ingredients in pesticide use, formulation, and accident investigation samples.

The Pest Control Division is constantly in contact with the U. S. Environmental Protection Agency assisting them in the preparation of reasonable regulations regarding the registration, usage, application, sale, disposal, and storage of pesticides in N. C.

Monitor pesticide sales, storage, and display and properly investigate all pesticide accidents or incidents reported. (We collaborate with the Department of Human Resources regarding humans in health-related pesticide accidents.)

A significant role in enforcing pesticide disposal requirements would also be implemented.

An organized, well equipped and trained Pesticide Emergency Team could respond rapidly with adequate resources to pesticide disasters and/or accidents for the purpose of directing emergency operations

in a manner to prevent additional hazards to man and the environment.

Provide the general public with information regarding requirements of the North Carolina Pesticide Law of 1971 and make them more aware of general safety practices involving use and storage of pesticides in and around the home and on the farm.

Analysis of Major Changes Proposed

a. Licensing of Private Pesticide Applicators in North Carolina

The Federal Environmental Pesticide Control Act of 1972 which is enforced by the Environmental Protection Agency (EPA) requires that all pesticide applicators (private and commercial) using federally restricted-use pesticides be certified by October 21, 1976, and that only individuals working under a certified applicator can use restricted-use pesticides.

The North Carolina Pesticide Law of 1971, in our opinion, already requires of commercial applicators the amount of training, including required written examination demonstrating level of expertise, that will be required by EPA by October 21, 1976; however, the North Carolina Law does not require licensing (certification) of private applicators; i.e., farmers, using federally restricted-use pesticides.

Two regulations being developed by EPA will dictate the magnitude of the Private Applicator Certification Program. Implications of present proposals are as follows:

1. Certification Regulations (Proposed)

- (a) States are responsible, including funding, for the certification of commercial and private applicators,
- (b) Private Applicators, i.e., farmers, using federally restricted-use pesticides, will need some formalized training followed by an oral or written examination or its equivalent, and
- (c) If a state does not certify private applicators, its private applicators will not be able to use federally restricted-use pesticides. Note: Without the use of certain pesticides, which undoubtedly will be federally restricted, economical

production of many of North Carolina's major crops would be impossible.

2. Classification of Pesticides (General and Restricted-Use)

- (a) Various drafts of criteria that may be used to classify pesticides indicate that 20,000 to 80,000 private applicators would have to be certified in North Carolina.

It is impossible to specifically state what benefits will be derived from the certification requirement in that final certification standards have not been established; however, one could generally expect such a program to better equip farmers to safely use pesticides in a manner consistent with best interest of man and his environment.

Based on the estimated cost of certifying commercial pesticide applicators in North Carolina, we would estimate that it will cost approximately \$20.00 per person to test and certify (license) farmers. This cost per person does not include the cost of training each farmer. In that N. C. State University was responsible for training commercial pesticide applicators, they are, therefore, the most likely candidate for training private applicators because of their experience.

During 1973 it was recognized that because of the stringent upcoming requirement of the Federal Law, the N. C. General Assembly would need to study North Carolina Pesticide Laws in light of federal requirements. Therefore, with our encouragement, the 1974 General Assembly adopted Senate Joint Resolution 1292 which established the North Carolina Pesticide and Structural Pest Study Commission which is made up of Senators and Representatives from N. C. to study present needs and report to the 1975 General Assembly those steps that should be taken to conform with federal requirements.

It is impossible to recommend appropriate legislative or administrative changes prior to adoption of previously referred to federal regulations.

We have strongly encouraged the EPA to consider less stringent certification programs than is implied in the present proposed regulation, such as certification through existing licensed pesticide dealers and correspondence-type course. To date EPA has not agreed to suggested alternate methods of certification.

Because of the definition for applicator certification and restricted-use pesticides are unestablished, it is impossible to develop a detailed analysis of what will be a major change in our program. During upcoming hearings of the previously referred to North Carolina Pesticide and Structural Pest Study Commission, we will seek appropriate legislation and funding to certify private applicators in conformance with federal law.

b. Inadequate Regulatory Control of Pesticides

The use of pesticides has developed since the 1940's into a major new four-billion-dollar industry. Environmental problems resulting from use, overuse, and misapplication of some chemicals have vividly pointed out the need for a strong pesticide regulatory control program. Recent experiences in North Carolina and elsewhere have shown that the more toxic but less persistent pesticides cannot safely be substituted for the persistent pesticides without stringent safeguards. Strengthened control of the quality, sale, use, storage, and disposal of pesticides is therefore essential.

The necessity to analyze increasing numbers of use, formulation, and crop samples to determine pesticide content for the purpose of controlling quality and use of pesticides has overburdened the Pesticide Laboratory to the point that it now takes up to eight weeks to perform analysis of pesticide samples. As a result, many lots of pesticides which have been determined to be deficient in active ingredients, adulterated, and/or excessive in active ingredients are sold prior to the time a "Stop Sale Order" can be initiated.

The Environmental Protection Agency has recognized the urgency to increase pesticide enforcement by providing 50-50 matching grant funds to increase staff, field and laboratory personnel in that most states, including North Carolina, are not providing for the amount of inspection, sampling, and assay of pesticides to properly regulate them.

The EPA reportedly will have available \$150,000 for North Carolina if North Carolina will appropriate \$150,000 in matching funds. In that the areas of enforcement in which the EPA is interested are very similar to areas of enforcement which need considerable strengthening in North Carolina, it would be beneficial to take advantage of this opportunity to expand regulatory efforts in these areas. A \$300,000 increase in the Pesticide Budget will provide for:

1. Five Chemical Analyst II's (\$55,000)
2. Four Pest Control Inspectors (\$34,000)
3. Three Enforcement Specialists (\$35,000)
4. One Assistant Staff Pesticide Officer (\$13,000)
5. Two Steno II's (\$12,000)
6. Supplies (first year \$15,000) Note: Supplies after first year should be approximately \$12,000 yearly
7. Travel Expense (\$15,000)
8. Equipment (\$81,000) Note: A \$37,000 GLC-Mass Spectrometer is necessary to more specifically analyze certain pesticides, especially in cases of accidents when unidentified pesticides are involved. \$18,000 for two additional Gas-Liquid Chromatographs. Eight additional automobiles will be necessary at a cost of approximately \$26,000
9. Motor vehicle operation (\$5,000)
10. For additional support line items (\$35,000)

Such a program will provide the mechanism for assessing civil or administrative fines against violators of the Law. It would be necessary to seek authority to assess such fines from the N. C. General Assembly. The Federal Pesticide Law has authority for this method of enforcement. Such authority in N. C. would be a valuable deterrent regarding continued violations of the N. C. Pesticide Law.

Pesticide inspections and formulation sampling and analysis would increase by approximately 75%. A minimum of 200 formulation establishment samples will be analyzed. Use and crop samples should increase by approximately 500 samples per year.

The Laboratory would be much more capable of providing badly needed specific analysis of active pesticide ingredients.

With the present staff and inspector personnel, we are not able to monitor pesticide sales, disposal, storage, and display or properly investigate all

pesticide accidents or incidents reported. (We collaborate with the Department of Human Resources regarding investigation of human health related accidents.) This program will provide enough manpower and laboratory back-up to increase accident or incident investigations by at least 150% thereby providing registration personnel with problem identification which, in some cases, could lead to reducing or removing such hazards. We would also be able to implement requirements of the Law for monitoring pesticide sales, storage and display and play a significant role in enforcing pesticide disposal requirements.

This program will not affect other programs other than provide them with additional information or services.

The only alternative to this program was to reduce the number of pesticide samples sent to the Laboratory and not implement those requirements of the Law referred to. This alternative was not practical and not in keeping with the intent of the N. C. Pesticide Law of 1971.

c. Unavailability of Funds and Trained Emergency Pesticide Team to React to Disasters Involving Pesticides

An emergency involving the burning of a large pesticide warehouse approximately two years ago vividly pointed out the need for readily accessible funds to obtain local manpower, earth-moving equipment, trucks, etc., for immediate impoundment, removal and/or disposal of large volumes of pesticides which pose an immediate hazard to man and the environment. Such funds would also be used to secure rapid transportation to the emergency site. In this particular case the municipal water supply and other adjacent areas could have been seriously contaminated had the warehouse owner not personally been willing and able to secure the necessary manpower and equipment.

Since then, near emergencies involving transportation of pesticides have occurred in North Carolina.

At the present time an Emergency Pesticide Team, made up of experts in State Government, is being organized by the N. C. Pesticide Board to respond to and direct emergency operations involving pesticides. This team will be available twenty-four hours a day.

The obvious Benefits of such a program are

1. to provide well trained and equipped pesticide experts to direct emergency operations
- and 2. to have funds available to provide manpower and equipment to perform those tasks necessary to prevent additional hazards to man and the environment.

The cost of such a program would be:

1. \$50,000 Emergency Pesticide Contingency Fund
2. \$2,000 for safety equipment; i e., gloves, hard hats, respirators, protective clothing, boots, glasses, etc. for Emergency Team and workers involved in emergency operations
3. \$1,000 annually for training Emergency Team
4. \$1,000 for portable communication equipment for use on emergency site.

The program would be initiated with \$50,000 being made available through an Emergency Pesticide Contingency Fund. A General Fund Appropriation of \$4,000 would be required in order to equip and train the Emergency Team with an additional \$3,000 requested annually in order to keep the Emergency Team trained and equipped on an up-to-date basis. During subsequent years, a state-wide emergency communication system, manned twenty-four hours a day, is planned. Additional equipment, including hazardous materials detection equipment, supplies to neutralize major spills of pesticides, will also probably be requested.

No legislation or administrative changes are needed to implement such a program.

The only effect of this program on other State government programs would be that expert pesticide personnel would have to be available in cases of emergencies.

The alternative of having multiple state agencies responding individually to such emergencies, as is now the case, was considered and determined impractical, inefficient, and very costly to the State.

ANIMAL HEALTH PROGRAM (BUDGET PAGE F-32)I. PROGRAM DEFINITIONPurpose

To control and eradicate animal diseases for the protection of human health, the protection of the livestock and poultry industries, and to assure the consumer of receiving the highest quality of animal products available.

Means and Methods Used to Achieve Purpose

1. All livestock markets in the state are licensed under this program upon recommendation of the Livestock Market Advisory Committee. Licenses are issued on the basis of proposed facilities meeting necessary sanitation requirements. A program of inspection and supervision is maintained over all such markets.
2. Livestock markets are required to be bonded and must subscribe to certain management practices for the protection of the livestock industry of the State of North Carolina. Market records are checked periodically by livestock inspectors to insure compliance.
3. Rules and regulations concerning the transporting of animals are enforced at all levels of trade. This is necessary and essential in the prevention of diseased animals from being transported and infecting other animals.
4. Regulations are developed and enforced concerning the entry of livestock into our state from other states. Health regulations are stringently enforced on these animals to prevent infected and diseased animals from entering North Carolina.
5. Feeders of edible garbage are required to be licensed. These feeders are inspected regularly to see that this material is properly cooked and fed under prescribed sanitary conditions. The cooking requirement is enforced to prevent disease organisms from being carried through raw pork to the live animal. This also has the effect of controlling certain human diseases.

6. Specific disease eradication programs are carried on jointly with the USDA. These include periodic testing and elimination of reactor animals. The diagnostic laboratory system is used for diagnosing animal and fowl diseases. This service is made available to effect rapid diagnosis of disease where this is difficult or impossible for a practicing veterinarian to do. These facilities are located in strategic areas of the state in order to give the most rapid possible diagnostic service. In many cases, time is extremely important in eliminating a disease problem that could result in great economic loss. These services are particularly important where animals apparently have been poisoned by some source.
7. Chicken and turkey hatcheries are licensed and inspected to prevent the spread of poultry diseases. This service is necessary in preventing the very rapid spread of certain poultry diseases caused by insanitary conditions.
8. Breeder flocks of chicken and turkey are tested for pullorum and other contagious fowl diseases. This is done to prevent the spread of these diseases through the hatchery and on to other farms.
9. A licensing and inspection program is carried out with rendering plants to insure that live-stock diseases are not spread through the handling and processing of dead animals and animal products.

Administrative Structure

The State is divided into 15 sections, each in charge of a Veterinary Medical Officer (VMO). Eight of the VMO's are State employees and seven are Federal employees. All fifteen are graduate veterinarians who have considerable background and experience in animal disease control and eradication. Most animal disease investigations are performed by these veterinarians. In addition to the VMO, each section has assigned from one to four livestock inspectors who assist the VMO.

History

The Animal Health Program was started in 1898 with the employment of the first State Veterinarian. The purpose has not changed through the years. The opening of the Disease Diagnostic Laboratories beginning with the Waynesville Branch in 1950 and culminating with the opening of Rollins Laboratory in Raleigh in 1972 has given added strength and direction to the program.

A Federal counterpart of the State Veterinarian had offices in the Agriculture Building (Raleigh) for many years prior to 1974. His responsibility was to work with the State Veterinarian in coordinating State-Federal animal health programs. Following a reorganization of the Animal and Plant Health Inspection Service (U.S.D.A.) in 1973, the position was abolished. Federal animal health programs in North Carolina are now administered from an office in Columbia, S. C.

Statutory Authority

1. Chapter 80, Article 7 authorizes the Department to register cattle brands.
2. Chapter 106, Article 11 sets forth the requirements for registration of stock and poultry tonics.
3. Chapter 106, Article 14A provides for the licensing and regulation of rendering plants.
4. Chapter 106, Article 34 deals specifically with infectious diseases of animals and empowers the State Veterinarian to conduct animal disease control and eradication programs.
5. Chapter 106, Article 35 specifies the requirements for operating public livestock markets.
6. Chapter 106, Article 35B requires the licensing and regulation of livestock dealers.
7. Chapter 106, Article 49 authorizes the Department to participate in the National Poultry and Turkey Improvement Plans and take other action required to protect the health of poultry.
8. Chapter 106, Article 49E requires poultrymen to maintain a disposal pit or incinerator for the disposal of dead poultry.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Ineffective Administration of State-Federal Animal Health Programs. In the recent past most of the animal disease control and eradication efforts have been conducted jointly by the State and Federal Governments. Following a reorganization of the Federal Animal and Plant Health Inspection Service in 1973, a trend toward becoming disengaged from animal disease control activities on a State level has become evident. Functions formerly performed by Federal personnel have been delegated to the State on a contractual basis. Federal clerical and technical personnel stationed at the Animal Health Division Office and Rollins Laboratory have been assigned to State supervision. As these positions become vacant by attrition, they are being replaced by State personnel, employed with 90 per cent Federal funds.

Difficulty has developed in coordinating the work of State and Federal employees in field positions. This has arisen because supervision of Federal field employees is the responsibility of an administrator located in Columbia, South Carolina. According to the plan, such supervision is coordinated with the State Veterinarian, but problems do occur and efficiency is impaired. For instance, it has happened more than once that a man depended on to be present to perform duties in connection with the State-Federal cooperative programs had been assigned temporarily outside of the State with little or no notice. The fact that salaries for comparable State positions differ, and differences in personnel policies, including leave and overtime work, further complicate the matter. The inability to fill vacant field positions because of Federal personnel ceilings is disruptive. Administration of the VMO Districts is made difficult because Federal personnel are not permitted to participate in all animal disease control and eradication efforts because they are not specifically funded, and they have the responsibility for certain activities not related to disease control in which the State does not participate. State personnel must travel from State Districts to Federal Districts to do work related to equine infectious anemia even though Federal employees have time available for the work. It is anticipated that the trend will continue and accelerate.

Response: Replace federally employed veterinarians and livestock inspectors at the rate of two each per year until all animal health field work is performed by State employees.

- b. Problem: Inadequate Animal Disease Diagnostic Laboratory Service. Laboratory, office, and storage space is overcrowded at Rollins Laboratory (Raleigh). Equipment and files are located in hallways. A large trailer located behind the laboratory building is being used to supplement the laboratory work area. An unsightly frame building located near the laboratory is used to store supplies.

Six small branch animal disease diagnostic laboratories are poorly located and have other disadvantages. For instance, the one veterinarian cannot be knowledgeable in all areas of animal disease diagnosis. Most of the branch laboratories are for poultry and give no service at all to livestock and pet owners. Poor service often results when the one veterinarian stationed at the laboratory is not available because he is on leave, sick leave, attending a meeting, or visiting a farm. There is an insufficient number of qualified personnel at the laboratories to perform the increased services needed. A laboratory large enough to have a larger staff would be able to give better service.

Response: Request sufficient funds from the General Assembly to build an additional 12,000 square feet onto the back of Rollins Laboratory. The completion of a new full service laboratory near Asheville early in FY 1974-75 will improve laboratory service in that area. Two of the eight small laboratories have been merged into the new facility. This is in keeping with a recommendation of the Governor's Efficiency Study Commission. Two new full service laboratories should be put into operation within the next five years. The location of one in the Statesville area and the other in Eastern North Carolina would offer good diagnostic laboratory service to all of the State. The three regional laboratories would replace the present six branch laboratories which would be closed. New laboratory positions should be created as needed and the competence of present personnel upgraded by additional training.

- c. Problem: Inadequate incinerator at Rollins Laboratory. Over \$7,000 has been spent on the incinerator since its installation two years ago. The hearth is in need of replacement and will cost in excess of \$4,000. All dead animals and disease specimens brought to the laboratory must be disposed of by incineration. The incinerator must comply with EPA standards for pollution control. During the approximately two weeks per year the incinerator is out of operation for repairs, the pathological material must be stored under refrigeration for later burning. This disrupts the orderly operation of the laboratory, makes working conditions unpleasant in the immediate area, and may at times pose a health hazard to the workers.

Response: Install a new incinerator of proper design and capacity. The present incinerator was purchased over the objections of the Laboratory Director who had documentation from other users that it was of poor design for the use intended.

- d. Problem: Lack of means for assisting fresh water fish industry with problems relating to disease, management and marketing. The production of fresh water fish for food and ornamental purposes is increasing. The production of trout, catfish, and ornamental species is well established. A survey conducted in 1973 showed that there were 131 trout farmers, 47 catfish producers, and 16 bait, tropical, and miscellaneous fish growers in the State. No statistics are available on the losses from diseases, poor management, and lack of marketing facilities. However, the interest shown by industry members in securing assistance with disease, management, and marketing problems indicates losses are appreciable.

Response: Employ a Fish Specialist to work with fish farmers of the State in the areas of disease control, management, and marketing.

Indicators of Expected Accomplishments

| | <u>1973-74</u> | <u>1974-75</u> | <u>1975-76</u> | <u>1976-77</u> |
|-------------------------------|----------------|----------------|----------------|----------------|
| Serological Testing | | | | |
| Brucellosis | 108,966 | 250,000 | 250,000 | 250,000 |
| Blood samples | 9,479 | 9,500 | 9,500 | 9,500 |
| Milk samples | 1,991,787 | 1,990,000 | 1,990,000 | 1,990,000 |
| Pullorum-Typhoid | 793,388 | 795,000 | 795,000 | 795,000 |
| Mycoplasmosis | 3,863 | 25,000 | 25,000 | 25,000 |
| Anaplasmosis | 32,426 | 33,000 | 33,000 | 33,000 |
| Leptospirosis | 11,442 | 52,000 | 52,000 | 52,000 |
| Equine Infectious Anemia | 156,418 | 160,000 | 165,000 | 170,000 |
| Other | 4,982 | 5,000 | 5,200 | 5,400 |
| Virological Examinations | 29,553 | 30,000 | 30,000 | 30,000 |
| Bacteriological Examinations | 17,388 | 20,000 | 21,000 | 22,000 |
| Parasitological Examinations | 1,699 | 2,000 | 2,200 | 2,400 |
| Chemical Examinations | 27,010 | 27,000 | 27,000 | 27,000 |
| Miscellaneous Examinations | | | | |
| Post Mortem Examinations | | | | |
| Swine | 1,379 | 1,300 | 1,300 | 1,300 |
| Cattle | 431 | 500 | 600 | 600 |
| Horses | 77 | 100 | 200 | 200 |
| Dogs | 247 | 300 | 350 | 400 |
| Chickens | 15,648 | 16,000 | 16,000 | 16,000 |
| Turkeys | 5,927 | 6,000 | 6,000 | 6,000 |
| Other | 969 | 1,000 | 1,000 | 1,000 |
| Field Investigations of | | | | |
| Disease Outbreaks | 1,978 | 2,000 | 2,100 | 2,200 |
| *Livestock Market Inspections | 4,785 | 4,785 | 4,785 | 4,785 |
| Inspections of Garbage | | | | |
| Feeding Operations | 6,995 | 6,995 | 6,995 | 6,995 |

*Includes horse shows and fair inspections

Analysis of Major Changes Proposeda. Inadequate Animal Disease Diagnostic Laboratory Service

An effort is underway to eradicate swine brucellosis in North Carolina. This is important because herds having no brucellosis are more profitable, and States without brucellosis have less difficulty with interstate and international shipments of swine. More important, the disease is transmissible to humans and causes a serious illness. In order to complete the effort economically, it will be necessary to locate every infected herd without the necessity of on-the-farm testing of all herds of swine in the State. This can be accomplished by testing blood samples collected at the time of slaughter if the hogs have been identified back to the farm of origin. The needed regulation has been passed by the Board of Agriculture and should be put into effect during 1974-75. It is estimated that 150,000 additional swine blood samples will be tested at Rollins Laboratory each year because of the eradication effort.

Anaplasmosis is a blood disease of cattle which causes losses to cattle owners by death of animals, decreased production, and reduced opportunity for the sale of cattle for feeding or breeding purposes. An increasing number of States and foreign countries require assurance that imported cattle are free of anaplasmosis. Reduction of the incidence of the disease will reduce these losses. A State-Federal procedure to develop and maintain herds free of anaplasmosis is now in effect. The goal is eventual eradication of the disease. Current laws and regulations are adequate. An estimated 25,000 cattle blood samples will be tested annually for anaplasmosis at Rollins Laboratory for the next several years.

Equine infectious anemia is a serious disease of horses and other equine animals. The great increase in the number and value of horses in North Carolina and the development of an accurate test for the disease have made it desirable to initiate an effort to remove it as a threat to the State's horses. It is incurable and no

vaccine is available, so there is considerable support from the horse industry. In 1974, the General Assembly enacted a law empowering the Board of Agriculture to promulgate regulations to control and eradicate equine infectious anemia. The Board of Agriculture has passed the necessary regulations. The testing of horses at the owner's expense will be required. It is estimated that 50,000 horse blood samples per year will be tested at Rollins Laboratory for the next several years. This compares with none in 1970, 34 in 1971, and 3,553 during 1973.

One Stenographer II at a cost of \$7,603 and one Medical Laboratory Technician III at \$11,860 should be employed for Rollins Laboratory (Raleigh) during the first year of the biennium. One Stenographer II at \$7,603, two Medical Laboratory Technicians II at \$19,862 and one Medical Laboratory Assistant at \$6,969 should be employed at the Asheville Laboratory during 1975-1979. One Medical Laboratory Technician II at \$9,931, two laboratory helpers at \$11,790 and one Microbiologist at \$22,542 will be needed during the second year of the biennium.

The alternative to eradicating swine brucellosis is to put our pork producers at a disadvantage in the production of pork and the movement of swine, and to perpetuate a source of human brucellosis (Undulant Fever). Not eliminating anaplasmosis will result in continued losses to the cattlemen of the State. This will become more costly as our cattle increase in numbers and quality.

Failure to employ an adequate staff at the laboratories will result in poor service and dissatisfaction on the part of the public the laboratories were built to serve.

b. Increase Space at Rollins Lab (Raleigh)

Adequate space does not exist at the Rollins Animal Disease Diagnostic Lab to meet the program demands. Due to budget problems at the time the Rollins Lab was constructed, approximately 12,000 square feet was deleted from the building. This deletion has resulted in extreme overcrowding to the extent that the building will no longer house personnel and

equipment to meet the program demands. At the present time a trailer has been borrowed from USDA to assist in alleviating some of the space shortage. In addition to the trailer, on sight storage of supplies and materials has been accommodated in temporary facilities. In order for the animal disease program to be adequately implemented, an addition of 12,000 square feet to the existing building is needed at an estimated cost of \$720,000. This addition will allow space to handle the various laboratory and diagnostic functions that are necessary to adequately provide information diagnosing animal diseases throughout the state. Due to the complexity of various biological tests run at the diagnostic lab, it is most essential that the adequate space be provided in order that lab results be accurate and available in a rapid manner. The only alternative available is to continue operation in the restrictive accommodation that we have. This will result in inadequate laboratory services and prevent program expansion that is needed to better serve the needs of North Carolina.

c. Inadequate Incinerator at Rollins Lab

The pathological materials incinerator at Rollins Laboratory is inadequate for proper disposal of materials in compliance with air pollution standards. Over \$7,000 has been spent on repairs of the incinerator since installation two years ago. This is a result of the design of the present incinerator which was selected over the objections of the Department of Agriculture. All dead animals and diseased specimens must be disposed of by means of this incinerator. Disposal must be such that rapid heat degeneration is possible within the air pollution discharge standards of the Environmental Protection Agency. At present, the hearth and the incinerator are in need of replacement at a cost in excess of \$4,000. In order to properly dispose of materials, it is necessary for us to purchase and install a new incinerator of proper design and capacity. The manufacturers of incinerators which would be of satisfactory design are quite limited. The unit that will best serve our purposes will cost approximately \$45,000. The only alternative is to continue use of the present unit and continue to pay excessive repair costs. This solution is sure to cost more in the long run and to continually hamper our operation.

d. Replace Federal Personnel

For many years most of the animal disease control efforts have been conducted jointly by the State and Federal Governments. A reorganization of the Federal Animal and Plant Health Inspection Service in 1973 has resulted in a trend toward withdrawing from cooperative programs. Essential positions have been abolished. Difficulty has arisen in coordinating the work of State and Federal employees in field positions. Supervision of those Federal employees remaining is the responsibility of an administrator located in Columbia, South Carolina. The fact that salaries for comparable State positions and personnel policies differ further complicates the problem.

Two veterinarians and two livestock inspectors should be employed during each year of the biennium to replace the corresponding Federal employees. The estimated cost including salary and travel for each veterinarian is \$22,542, and that for each livestock inspector is \$12,504.

Failure to assume the responsibility for animal disease control in the State as the USDA withdraws will result in avoidable disease losses to our livestock industry.

e. Fish Specialist

Production of fresh water fish for food and ornamental purposes has increased considerably over the past several years. Trout, catfish, and ornamental species production is well established in this state. In 1973, a survey indicated that there were 131 trout farmers, 47 catfish farmers, and 16 bait, tropical, and miscellaneous fish growers in the state. Although no firm statistics are available on losses in this industry, disease management and lack of adequate marketing facilities are taking a high toll. Many producers indicated that they had been forced to go to other states to seek help with fish disease problems.

To assist the growing industry, a fish specialist should be employed in the 1975-76 fiscal year to assist producers in the areas of disease and

control and fish management. Fish production is such that most disease problems are directly associated with management practices. This person must have the training and ability to make on-the-farm visits to identify problems, and should have the diagnostic capability in the laboratory of determining the specific types of disease organisms encountered. The estimated cost of this program will be \$20,316 for salary, benefits, and travel for the fish specialist.

MEAT AND POULTRY INSPECTION PROGRAM (BUDGET PAGE F-33)I. PROGRAM DEFINITIONPurpose

To insure a wholesome meat and poultry product for the consumers of North Carolina and to protect the legitimate slaughterer and processor.

Means and Methods Used to Achieve the Purpose

The program provides a meat and poultry inspection service which provides constraints to prevent the slaughter of diseased animals and prevent the adulteration and mislabeling of meat food products.

1. Ante-mortem and post-mortem inspections are performed on all red meat animals and poultry slaughtered under the Meat and Poultry Inspection Service in order to detect diseased animals and unwholesome products before they reach the consuming public.
2. Surveillance inspection of slaughtering and processing facilities is maintained to see that the procedures used in handling and processing of meat and poultry products are in compliance with required sanitary standards.
3. Review of all labels used to assure they meet requirements of the law and regulations, that they supply sufficient information to the consumer and that they are not deceptive.
4. Review of blueprints of additions, changes, or new construction to assure compliance with current regulations.
5. Investigations by the compliance staff are conducted on complaints which allege possible violations of the North Carolina Compulsory Meat and Poultry Inspection Laws. Violations of these laws are handled in cooperation with the North Carolina Department of Justice.

6. Inspection procedure directives and training activities are used to insure that our meat and poultry inspectors are aware of current Federal regulations and guidelines. This insures that the laws pertaining to meat and poultry products are administered uniformly throughout all parts of the state.

Administrative Structure

The program is administered under the state control by central office directorate and has supervisory personnel assigned to eleven areas covering the state. The program is conducted on a 50-50 fund sharing basis with the state having concurrent authority with the Federal Government.

History and Statutory Authority

1962 - The Meat and Poultry Inspection Service originated in 1962 with authorization in Chapter 106, Article 49C and Chapter 106, Article 49D of the General Statutes. These laws provided for intra-county exemptions from inspection requirements.

1968 - Wholesome Meat Cooperative Agreement effected to allow for 50-50 Federal-State cost-sharing.

1969 - Meat Inspection Law amended to repeal intra-county exemption (G. S. Chapter 106, Articles 49B and 49C).

1971 - Meat Inspection Law amended to repeal farmer retail exemption. Federal regulations adopted by repeal of Chapter XIII and XIV and adoption of new Chapter XIII.

Poultry Inspection Law amended (Article 49D, Chapter 106). These amendments made both laws equal to Federal Meat and Poultry Inspection Laws. State Meat and Poultry Inspection Program recognized as at least "equal to" the Federal Meat Inspection Program.

1973-74 - Program maintains "equal to" Federal status. Compliance staff began investigative program January 1, 1974.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Monitoring of meats for chemical residues. Feeds fed to meat animals may be contaminated with chemicals such as insecticides and fungicides which were used on the fields where the food crops were grown. Components of manufactured feeds may also become contaminated in the manufacturing process. As a result, animal tissues may become contaminated when fed these feeds. The method used to prevent meat products containing chemical residues from reaching the consumer is to sample and test animal tissues at the packing plant level on a statistical basis. When chemical residues are detected, the producers in the area are placed under quarantine until the source and extent of the contamination are known. Producer herds must then be cleared by investigation and testing prior to slaughter and the contaminated feed destroyed for use in animal feeds.

Response: Complete state participation in residue monitoring program on a statistical sampling basis. It is now in progress in Federal plants, but USDA authorities have not yet designated sampling in state plants.

- b. Problem: Bacteriological monitoring of communitied meats. This program would be similar to the requirements for bacterial standards now used in the dairy industry. Standards for bacterial counts per gram of meat (frankfurters, bologna, hamburger, sausage, etc.) would be determined and required for all meat products as a part of the inspection regulations.

Response: Standards have not as yet been arrived at for all types of meat products. This program will need considerable Federal research and planning prior to its institution as a regulation requirement.

- c. Problem: Unified State-Federal Inspection System. A unified inspection system has been discussed by the Meat and Poultry Inspection Advisory Committee in Washington. The main purpose of this system would be to allow meat

plants now under state inspection to ship products in inter-state commerce. It would also provide for joint utilization of state and federal inspection personnel within a state boundary.

Response: Continue to be advised of the progress toward the adoption of this type of inspection program to insure that inspection under it will be fairly applied to small as well as large packing plants, and that inspectors now working under State Inspection Systems are given equal opportunity with those of the Federal Inspection System.

- d. Trends: It appears the number of plants requiring inspection will remain relatively stable over the next five years. Consolidation of small plants into fewer but larger plants, as has been expected over the last five years, has not materialized. The trend is for fewer plants, but at a very slow rate of possibly four or five plants per year. Production volume of meats requiring inspection should remain constant with the possibility of a slow upward trend. As plant managements' familiarity and voluntary compliance with inspection requirements increase, the need for inspection coverage decreases in processing plants. There appears to be a trend in this direction at the present time which has resulted in a reduction in force of two inspectors, and there is a good possibility that six will not be filled.

III. PLAN FOR THE 1975-77 BIENNium

Indicators of Expected Accomplishments

| Item | 1973-74 | 1974-75 | 1975-76 | 1976-77 |
|-----------------------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|
| Plants requiring inspection (Ante-and post-mortem processing, sanitary surveillance) | 334 | 332 | 329 | 324 |
| Animals and Poultry inspected at slaughter | 12,326,748 | 12,200,000 | 12,000,000 | 11,850,000 |
| Diseased animals and poultry condemned before/after slaughter | 172,574 | 170,800 | 168,000 | 165,900 |
| REINSPECTION | | | | |
| Processed meat and poultry passed | 220,661,598 | 211,411,598 | 211,911,598 | 212,200,000 |
| Processed meat and poultry condemned | 220,661 | 211,412 | 211,911 | 212,200 |

The operation of the Meat and Poultry Inspection Program which is a regulatory function will continue in the next biennium without any major change. Ante-mortem, post-mortem, processing, reinspection, waste control, inedible, and condemned products control, product labels control, and sanitary facilities and equipment inspections will continue on a daily basis in the 334 packing plants now under inspection. The compliance staff will continue to review establishments which store, transport, or hold meat products for sale for possible illegal sales of uninspected, adulterated, or misbranded meat products.

The effectiveness of the program will be monitored by the Federal Government by plant reviews on a quarterly basis. Since this program is a cooperative effort with the USDA on a 50-50 fund sharing basis, the operation of the program will also be subject to operational and fiscal audit by the Federal Government.

Training will continue on an on-the-job basis by in-house instructors, and twenty inspectors will receive formal training in Federal training schools.

A Federal-State residue monitoring program will be affected. Sampling will be done on a statistical basis with plants for sampling designated by computer in Washington. The program is designed to reduce drastically the number of samples a state would have to take in order to be statistically accurate were it to operate an independent program. The cost of the program will not significantly affect the budget.

CONSUMER STANDARDS PROGRAM

Effective July 1, 1974, the Weights and Measures and Gasoline and Oil Inspection Divisions were combined and named "The Consumer Standards Division." This result of reorganization within the North Carolina Department of Agriculture will bring about a more relevant identification of the work of the divisions with the public.

The purpose of the Consumer Standards Division is to establish uniform commercial standards of measurement, quality, and safety so that the consumer will be protected and so that a business climate exists in which no individual gains an economic advantage over a competitor by lack of adherence to these standards.

WEIGHTS AND MEASURES SUBPROGRAM (BUDGET PAGE F-34)I. PROGRAM DEFINITIONPurpose

To carry out the law in respect to protecting the purchaser and/or seller of any commodity in the State of North Carolina against misrepresentation of any product concerning its weight, measure, or length or any other standard of measurement normally accepted in the channels of trade.

Means and Methods Used to Achieve the Purpose

1. Enrollment in a laboratory auditing program to insure that the North Carolina Primary Weights and Measures Standards Units are identical to the National Standards Units housed at the National Bureau of Standards.
2. Prototype approval of commercial weighing and measuring devices.
3. Periodic unannounced inspections of weighing and measuring devices used commercially.
4. Periodic unannounced reweighing of packaged products both retail and wholesale in the channels of trade.
5. Checking package labels to insure that the net contents statement is legible and that it meets all other legal requirements.
6. Periodic unannounced reweighing of commercial bulk deliveries.
7. Tobacco barn curer installation inspection.
8. Licensing of Public Weighmasters.
9. Registration of servicemen who repair commercial weighing and measuring devices.
10. Approval of plot plans for liquid fertilizer installations.

11. Issuance of information and/or warning letters to firms not in compliance with the law.
12. Instituting criminal proceedings against persons, firms, or corporations who clearly and substantially are in violation of the law.
13. Dissemination of information - news releases, various articles for newspapers and trade journals, addresses before public gatherings, consumer, and trade groups.

Administrative Structure

The Administrative staff for this program is located in Raleigh. The metrology laboratory is located in Raleigh. The personnel who carry out this program live in their assigned territories.

Statutory Authority

Chapter 81 of the North Carolina General Statutes.

History

The Weights and Measures Law was written in 1927, establishing the Office of Superintendent of Weights and Measures. At that time, the only primary concern was that weighing and measuring devices used in trade be inspected. Stores where retail trade was carried on were primarily small neighborhood-type stores, and the reasoning was that if the weighing and measuring device itself was correct, and placed in a position where the customer could read the indicator, that the consumer would be protected. The merchant of the day knew, and was usually a personal friend of each customer, and his reputation for fair dealing was paramount to his remaining in business. As cities and communities grew larger, this familiarity between businessman and customer began to diminish, more prepackaged merchandise came into the market place, and from time to time new sections and articles were added to the law. Generally, these new sections and articles were responses to new needs arising from changing trade conditions mentioned above. This process of changing trade customs has continued until today, and it appears that this process will continue.

Briefly stated, the changing trade customs still require that the devices be correct; but in addition to this, prepacked items must be weighed correctly, all of the information for use of the product must be included on the package in legible terms so the information will be useful to the consumer, and all types of modern merchandising methods must be monitored.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Obsolete law, rules, regulations, definitions, and standards and method of sale of commodities provisions. The North Carolina Weights and Measures Law (Chapter 81 of the General Statutes of North Carolina) was enacted by the Legislature in 1927. It was then amended in 1931, 1939, 1941, 1943, 1945, 1949, 1953, and 1957. These amendments merely added various requirements to the original law or were wording changes. This process has resulted in a lengthy and cumbersome document that is difficult to understand.

In accordance with this legislation, Chapter VI of the Rules, Regulations, Definitions, and Standards of the North Carolina Department of Agriculture has been promulgated. At various times since 1927, some specific commodities have been regulated as to the required method of sale. The way that business is done has changed over the years so that it is now necessary to have modern Laws, Rules, Regulations, Definitions, and Standards and a comprehensive method of sale of commodities regulation recognizing modern merchandising methods.

Response: Rewrite Chapter 81 of the General Statutes, rewrite Chapter VI of the North Carolina Department of Agriculture Rules, Regulations, Definitions, and Standards, and write a method of sale of commodities regulation, each of which will be compatible with each other and with modern commerce.

- b. Problem: Lack of public knowledge of the metric system of measurement. The United States is the only major industrial country that does not predominately use the metric system of measurement. It has become an "island" in a metric world. It is generally believed that this condition has a depressing effect on our trade with other countries.

It is expected that Congress will pass a Bill soon which will cause the system of measurement in the United States to change over a period of years from the English System of measurement predominately to the metric system predominately. The citizens of North Carolina are not prepared for the problems that will be generated in the next five years by this measurement system change.

Response: Introduce legislation creating a North Carolina Metric Coordinating Committee. Develop and put into use a course designed to thoroughly educate division personnel. Determine industry metrology needs caused by conversion. Purchase equipment to test metric measuring devices as needed, and closely monitor problems of conversion encountered in Canada and Australia, as these countries are also in the process of changing measurement systems.

- c. Problem: Increasing demand for services. Increased industrialization of North Carolina, changing trade customs, and increased consumer awareness of the work done by the Weights and Measures Division have caused an increase in the work load to the extent that by 1980 we will need five new weights and measures inspectors to adequately carry out the law.

Response: Add two inspectors in the 1975-1977 Biennium and add three more by 1980.

III.

PLAN FOR THE 1975-77 BIENNium

Indicators of Expected Accomplishments

| | <u>71-72</u> | <u>72-73</u> | <u>73-74</u> | <u>74-75</u> | <u>75-76</u> | <u>76-77</u> |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Number of Inspections | 18,371 | 19,207 | 18,291 | 19,000 | 28,000 | 28,000 |
| Devices Approved | 58,557 | 63,028 | 59,006 | 60,000 | 65,000 | 65,000 |
| Devices Condemned | 1,369 | 2,527 | 2,173 | 2,240 | 3,500 | 1,500 |
| Devices Confiscated | 207 | 113 | 118 | 110 | 125 | 50 |
| Deliveries Inspected | 3,324 | 3,107 | 2,844 | 3,500 | 4,500 | 4,800 |
| Deliveries Condemned | 224 | 177 | 140 | 180 | 300 | 150 |
| Packages Inspected | 191,237 | 182,197 | 166,631 | 250,000 | 300,000 | 300,000 |
| Packages Condemned | 40,513 | 35,545 | 34,506 | 40,000 | 60,000 | 20,000 |
| Special Investigations | 84 | 90 | 93 | 185 | 250 | 300 |

Analysis of Major Changes Proposeda. Obsolete Law, Rules, Regulations, Definitions, and Standards and Method of Sale of Commodities Provisions.

The North Carolina Weights and Measures Law, (Chapter 81 of the General Statutes of North Carolina) was enacted by the Legislature in 1927. It was then amended in 1931, 1939, 1941, 1943, 1945, 1949, 1953, and 1957. These amendments did not constitute a rewriting of the 1927 Statute. The amendments merely added various requirements to the original law or were wording changes. This process has resulted in a lengthy and cumbersome document that is difficult for inspectors to understand. It is also difficult for consumers and businessmen to understand. Experience indicates that a higher level of voluntary compliance takes place when the individual citizen reads the Laws or Regulations than when instructions are supplied to him by a regulatory official. Court decisions have resulted in the law possibly being unconstitutional. The law does not provide for the Director of Weights and Measures to have the right to apply for injunctive relief. It does not contain a separability provision preventing the entire law from being unconstitutional, if some part of it were found to be unconstitutional. If the monetary penalty provisions of the law were sufficient in 1927, it would seem that they are now less severe than would be proper. The present law does not give the inspector the authority to issue a stop-sale order for shortweight packages found, except for the purpose of seizing them for use as court evidence.

Since the law was written, methods of merchandising have changed. The "Fair Packaging and Labeling Act" is now Federal Law which declares null and void all regulations or laws less stringent than or different from the Fair Packaging and Labeling Act. Our law is not only different than but also less stringent than the Federal Law. Different materials for packaging and better and faster methods of packaging are now available. The handbook (National Bureau of Standards Handbook 44) which contains the specifications and tolerances and user requirements to which weighing and measuring devices are manufactured, has been completely revised and changed. A new handbook (National Bureau of Standards Handbook 67) is being prepared by the National Bureau of Standards in conjunction with the Federal Trade Commission, the United States Department of

Agriculture, and the Food and Drug Administration which will be a legally acceptable method of sample selection for inspecting packaged products. Interstate buying has increased to the point where uniform methods of sale of commodities must be compatible with other states. Uniformity in the methods of sale will result in consumers being more informed as to the quantity involved in a purchase and also will result in less production expense to the seller. North Carolina has specified in several documents the method of sale by which some commodities must be sold. The list is not inclusive, however, and does not exist in a single document.

Because of these factors, the state should rewrite Chapter 81 of the General Statutes, rewrite Chapter VI of the North Carolina Department of Agriculture Rules, Regulations, Definitions and Standards, and write a method of sale of commodities regulation, each of which is compatible with the other and with modern commerce.

ALTERNATIVE A: Amend Chapter 81 of the General Statutes and amend Chapter VI of the North Carolina Department of Agriculture Rules, Regulations, Definitions and Standards and do not write a method of sale of commodities regulation.

This is rejected because the process of amendments through the years has resulted in a cumbersome document not easily understood. Further amendments increase this problem, and no method of sale of commodities results in confusion in the market place to the consumer and impedes interstate buying and selling and is more costly to the manufacturer or seller.

ALTERNATIVE B: Leave Law and Regulations as now promulgated and write no method of sale of commodities provisions.

This is rejected as the present Law, the present Regulations, and the present method of sale of commodities provisions are not compatible with present day commerce.

b. Lack of Public Knowledge of the Metric System of Measurement

The United States is the only major industrial country that does not use the metric system of measurement predominately in commerce. The other countries which do not use the metric system of measurement and have no plans to switch to the metric system are:

- | | |
|-------------|--------------------|
| 1. Barbados | 7. Muscat and Oman |
| 2. Burma | 8. Nauru |
| 3. Gambia | 9. Sierra Leone |
| 4. Ghana | 10. Southern Yemen |
| 5. Jamaica | 11. Tonga |
| 6. Liberia | 12. Trinidad |

Thus the United States has become an "island" in a metric world. The measurement system in use in these few countries is of little consequence since they are not industrial nations. They carry on little trade with other countries but this situation is a substantial trading barrier to the United States.

Changing measurement systems in an industrialized country does cause major problems. It costs industry in personnel education, engineering, and research, manufacturing and quality control, records and accounting, warehousing, etc. It also causes problems among the general public. Most of the public problems relate to a lack of understanding of the metric system of measurement. Of the entire general population, only adults are not usually enrolled in an educational institution where metric orientation and education will be available. The adults' problem is further compounded because the adult has used the English system of measurement longer. The adult does more buying and selling than younger age groups. It is generally accepted that adults learn a little slower than younger age groups under these circumstances.

It is estimated that Congress will soon pass a metric bill and that this bill will provide for a period of time for the transition from the English system predominately to the metric system predominately. The bill will also provide for a National Metric Coordinating Committee to work with State coordinating committees in order to facilitate the transition. Such a State committee would be in a position to gather information and provide for input into national planning. It should, therefore, represent all of the diverse affected interests in the State. Such a committee

would be in a position to make the transition easier for the general public, and at the same time advance in the early planning stages interests which may be found to be particular to the people of North Carolina.

During the 1975-77 biennium, we plan to ask the Legislature to create a metric coordinating committee composed of approximately fifteen members representing all segments of North Carolina society involved in the conversion process. This committee would then meet and submit to the next Legislature a detailed plan of coordination together with a budget request it would deem necessary. The original bill creating the committee would ask for travel funds for all members appointed who are not state employees. The amount of this request would be for three meetings during the first year. The amount of the request will be \$3,500.00 for per diem expenses to private citizens appointed on the committee. State employees appointed on the committee would be paid from the regular budget already approved for the agency involved. This amount would allow for approximately ten of the members appointed to be private citizens.

c. Increased Demand for Services

The work load of the Weights and Measures Division has increased because of the increase in weighing and measuring technology, and because of the need for increased accuracy in weighing and measuring in commerce. The introduction of load cells made possible by sophisticated strain gauges has made "in motion" weighing possible. Computer and memory systems make possible the scanning of packages for pricing and weighing. These and other technological advances have created a situation where more goods are bought and sold by weight or measure. Consumer awareness has caused an increase in the demand by the public for the services of the Weights and Measures Division. Merchandising techniques have been introduced that require more supervision by the inspector. These needs are arising both from retail outlets and from wholesale commercial outlets. These factors indicate that by 1975-77 we will need at least two additional weights and measures positions in order to maintain the present level of services. We will therefore ask for these two positions during the 1975-77 biennium. The cost will be \$13,144.00 for each position.

GASOLINE AND OIL SUBPROGRAM (BUDGET PAGE F-35)I. PROGRAM DEFINITIONPurpose

To see that the consumers of petroleum products in North Carolina receive the quality and quantity of product as represented to them. Also, these laws and regulations assure that the State of North Carolina is in a position to receive the correct amount of tax revenue on distributed products.

Means and Methods Used to Achieve the Purpose

1. Handlers of petroleum products are registered to establish identity. All independent brands of gasoline are also registered by this Division.
2. All metering devices for petroleum products are tested periodically for accuracy and safety. This includes gas station pumps, home delivery trucks and other delivery systems. A seal of accuracy is affixed to the device and without this seal, use is illegal.
3. Bulk delivery vehicles are calibrated and certified by this Division, each being sealed to contain a definite quantity in each compartment. Such vehicles are required to be calibrated and certified prior to being used in commerce.
4. The Gasoline and Oil Board makes recommendations to the Commissioner concerning the quality standards for petroleum products sold in North Carolina. Analyses are run on petroleum products to insure the consumer of getting the products as represented.
5. Stop sales are issued on petroleum products not meeting required standards.
6. Metering devices found to be out of tolerance are sealed against further use until they are corrected.
7. Minimum standards for quality and safety are established for the storage, handling, and distribution of Liquefied Petroleum Gas. Each facility is inspected and approved before a registration to operate is issued.

8. All LP-Gas dispensing vehicles are checked on a yearly basis to insure safety and accuracy of their metering devices.
9. Routine inspections and tests are made in all areas of responsibility with the Gas and Oil Law, and individual complaints are investigated immediately to see that the consumer is adequately protected.
10. Inspectors with portable laboratories run minor analyses on the spot and collect samples at point of sale for complete analyses at the Central Laboratory in Raleigh. There are twelve inspectors operating the portable units throughout the state, who have their headquarters at their homes.
11. Twenty-five Gasoline and Oil Inspectors who test the various weighing and measuring devices are located at various areas throughout the state with assigned territories, using their homes as headquarters.
12. There are five calibrators who routinely inspect home delivery and bulk delivery trucks on a periodic schedule.
13. A Central Laboratory is located in Raleigh to which samples of various types are sent for complete analyses to determine their compliance with meeting the registered specifications and other requirements. This laboratory is staffed by one Chemist IV, four Motor Fuels Analysts, three Octane Rating Analysts, and two Metrologist-Calibrators. The Metrologist-Calibrators check test measures, truck calibrations, and other Weights and Measures activities.
14. The LP-Gas enforcement consists of one LP-Gas Engineer and three LP-Gas Inspectors. The Engineer checks plans and formulates policies for inspections while directing two home-based inspectors with assigned territories, to insure compliance with the safe handling and storage requirements of LP-Gas. One inspector is assigned specifically to the checking of delivery trucks for proof of accuracy of delivery and safety of the delivery equipment.
15. The division maintains direct contact with the various companies and trade associations by dissemination of information through the news media and addresses to trade and civic organizations.

16. The Division registers all mechanics who repair petroleum dispensing equipment to insure that the industry gets accurate repair service.

Statutory Authority

Chapter 119 of the North Carolina General Statutes.

History

The first laws relating to petroleum products were begun in 1903, at which time heating oil, "kerosene", was being used primarily for the purpose of obtaining better lighting. Some of this product contained such a large amount of sulphur that it was found to be a health hazard as well as causing the deterioration of various fabrics and other materials. The enforcement of this law was assigned to the State Chemist in the Department of Agriculture, whose office later became known as the Division of Analytical Chemistry. As the need arose, additional laws and regulations were passed relating to these products. In 1937, under Chapter 119, the legislature rewrote the laws relating to these products, and the Division was transferred to the Department of Revenue. In 1949, the legislature transferred the Division back to the Department of Agriculture where it has remained. The reason for the return to the Department of Agriculture was its relationship to the activity of the Weights and Measures Division and the familiarity of regulatory work and analytical work of the Department of Agriculture. Until 1955, the enforcement of the LP-Gas law and rules and regulations were under the Department of Insurance; however, the industry, realizing the need for stronger laws and regulations to protect themselves and the users of such products, requested the transfer to the North Carolina Department of Agriculture as no enforcement or rules and regulations had been undertaken by the Insurance Department. New laws were drawn and regulations adopted which have been amended as needed.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Energy Crisis. Due to the Energy Crisis which we have experienced during the past year, many new problems have developed and are continuing to develop in the Gasoline and Oil Inspection program. Consumer awareness and interest due to the shortage and the sharp increase in price have resulted in consumer complaints which have multiplied a hundredfold. These complaints relate to poor quality and short measure, mixture of water in product, poor engine performance, etc. The shortage of product created the situation of dealers attempting to obtain products from any source whatsoever and sell under brand names other than those registered, the emptying of tanks more frequently with the possibility of a mixture of residue being delivered into fuel tanks, the offering for sale of products below minimum specifications, and/or the blending of grades.

Response: Give prompt attention to complaints. Make more visual inspections and increase the number of analytical inspections. Increase news releases informing the public of the areas of greatest concern.

- b. Problem: Federal Environmental Protection Agency Requirements and Changes of Automotive Manufacturers. In conjunction with the Energy Crisis and the requirements of the Federal Environmental Protection Agency, there is a gradual change in the composition of both gasoline and oils. This change has been and will be a gradual change in the foreseeable future. Processing changes have been made at the refinery to secure as much finished product as possible from available crude oil. The automotive manufacturers are redesigning their engines. In order to have an acceptable fuel, additional additives and other properties are being incorporated into the finished product of gasoline and/or diesel fuels.

Response: We will ask the Gasoline and Oil Inspection Board to adopt new specifications for the gasoline that is now available for present day automobile engines.

- c. Problem: Introduction of non-leaded gasoline in channels of trade. The Federal Environmental Protection Agency has promulgated regulations effective July 1, 1974, requiring all retailers of gasoline who sell 200,000 gallons or more per year to offer at 60% of their retail outlets at least one un-leaded gasoline. There is a tolerance permitted of .05 grams lead per gallon. The tolerance is permitted because it is impractical to require separate handling of this product by pipelines and delivery trucks. A product which left the refinery with no lead at all would pick up a small amount of lead in the pipeline or transport truck which had previously moved a leaded product. We have had no lead content specifications prior to this, but this will require that such specifications be adopted. This also makes it necessary that our inspection personnel use extreme caution in handling this product when testing for quality or quantity. The penalty set by the Environmental Protection Agency is \$10,000 maximum fine for each contamination violation.

The Gasoline and Oil law requires the calibration and sealing of compartments which transport and deliver petroleum products, and the introduction of these new petroleum products is creating a situation which must be handled immediately. We presently use a solvent in the measuring of these capacity containers. This product is contained in underground storage tanks and is returned to them after being used in the measurement and calibration process. In doing so, it picks up residue of the products which have been transported in these compartments and becomes contaminated.

Response: The addition of a separate storage tank to contain the product to be used only for the calibration of non-leaded compartments will be required to prevent the contamination of the compartment if one type of product was used for all calibrations. In that we do not have such facilities, this item must be budgeted.

- d. Problem: Automatic adoption of Rules, Regulations, Specifications, and Tolerances of National Conference of Weights and Measures. The National Conference is made up of the various Weights and Measures officials from all across the United States. North Carolina Weights and Measures

officials have taken an active part in this body and are respected members of the Conference. It is a necessity that we continue to be active in the Conference. Because of the dense population in other areas of the country, North Carolina and the entire South is in the minority in representation of this body. The automatic adoption of the promulgated rules, regulations, specifications, and tolerances of this Conference prevents the citizens of North Carolina from having the usual and final right of review by its elected representatives.

Response: Amend Chapter 119-33 of the General Statutes by deleting in Lines 10 and 11, "and approved by the National Bureau of Standards." (This is meaningless as the Bureau has no authority and does not approve or disapprove rules, definitions, and tolerances). We, therefore, should substitute for the deletion, "approved by the North Carolina Board of Agriculture."

- e. Problem: Wilmington Calibration Station. Because of the large number of transport trucks used in the distribution of petroleum products, based in Wilmington and the immediate area, it was found necessary in 1941 to build a small calibration station to supplement the main calibration service rendered in Raleigh. The facility has become obsolete and limited in function due to changes in industry demands. Since the installation of the facility, tanker truck size has almost doubled. This increase in weight of the trucks has damaged the test platform which must be level to insure accurate calibration. The increase in truck length now makes it impossible for trucks to enter the station as originally designed due to narrow streets in the area. The calibration station is located in what is now a completely developed residential area. Complaints are received concerning the hazards of petroleum tankers in this area of town. Space limitations make it impossible to economically alter the present facilities. The City of Wilmington now prohibits the discharge of water used to calibrate tankers into the sewer system due to the chance of petroleum contamination.

Response: Build a new calibration station at Wilmington with a size and capacity which would speed up the calibration of trucks of the size

now being used. This facility should be built in the vicinity of the State Ports Authority property which is located in the immediate area from which trucking lines operate. This would also permit the disposal of the water which is used for calibration. This will necessitate a request in the budget for this calibration station.

- f. Problem: Excessive time and manual labor of gasoline and oil inspector's work. Indications are that in the future there will be a smaller number of service stations. Future stations, however, will have more dispensers located at each station and be able to serve more cars. At the present time, it is necessary to run twenty gallons of product through each dispenser on each test at a service station. The inspector must draw four samples each in a five gallon test unit, and after each five gallon calibration, the container must be carried to the fuel storage area for dumping. As the stations have enlarged and continue to enlarge, larger storage facilities are being installed which are located further from the pump areas. The pump inspector in some cases may make thirty to fifty trips from the pumps to the storage tanks to empty test calibration containers. This involves extensive loss in time and effort and contributes nothing toward the actual job of testing the dispenser.

Response: Purchase vehicles designed to speed the inspection process and eliminate much of the manual labor now being done. By using this method of inspection, a considerable increase in the number of inspections made per day could be accomplished. We will request additional funds during the 1975-77 biennium to provide for one truck which would be a proto-type in order to prove that this method will be cheaper and much more efficient than the present system which we are using.

III. PLAN FOR THE 1975-77 BIENNium

Indicators of Expected Accomplishments

| | <u>1972-73</u> | <u>*1973-74</u> | <u>1974-75</u> | <u>1975-76</u> | <u>1976-77</u> |
|-----------------------------------------------|----------------|-----------------|----------------|----------------|----------------|
| Number of Visits | 30,392 | 27,954 | 25,000 | 25,000 | 25,000 |
| Number of Gasoline and Diesel Pumps Inspected | 86,379 | 83,000 | 90,000 | 90,000 | 90,000 |
| Number of Kerosene Pumps Inspected | 10,853 | 9,829 | 8,900 | 8,500 | 8,300 |
| Number of Tank Truck Meters Calibrated | 7,122 | 6,786 | 7,000 | 7,000 | 7,000 |
| Number of Tank Trucks Calibrated | 715 | 912 | 900 | 900 | 900 |
| Number of Field Analyses | 27,360 | 20,504 | 30,000 | 30,000 | 30,000 |
| Number of Laboratory Analyses | 43,079 | 53,221 | 47,000 | 47,000 | 47,000 |
| Number of LP-Gas Visits | 4,557 | 5,004 | 5,000 | 5,200 | 5,500 |
| Number of LP-Gas Inspections | 7,800 | 9,368 | 9,500 | 10,000 | 10,500 |

NOTE: Due to the "Energy Crisis", the year 1973-74 does not reflect normal conditions as to inspections or samples in that a number of visual inspections were necessary because of shortage of product and number of analyses made on special requests.

Analysis of Major Changes Proposed

a. Federal Environmental Protection Agency
Requirements and Changes Made By Automotive
Manufacturers

Because of the scarcity of the petroleum products, and in order to reduce the amount of pollution in the atmosphere, a change is taking place in the composition of petroleum products. These changes will enable the refinery to produce the maximum amount of gasoline per barrel of crude and at the same time reduce those emissions from the automobile considered by environmentalists to be harmful. New additives are being incorporated into the finished product of gasoline and diesel fuels. Automotive manufacturers have, therefore, altered their engine specifications accordingly. We will ask the Gasoline and Oil Inspection Board during the 1975-77 biennium to promulgate new gasoline specifications to assure the public that an acceptable product is being offered for sale in North Carolina.

b. Introduction of Non-Leaded Gasoline in Channels
of Trade

Beginning July 1, 1974, all companies selling at least 200,000 gallons of gasoline per year are required to offer a non-leaded product in at least 60% of their retail outlets. The vehicles which are used to transport this product from the distributor to the retail outlet will have compartments in which non-leaded product will be carried. This will be necessary because if leaded product is put into a compartment and then later a non-leaded product is put into the same compartment, some contamination of the non-leaded product takes place. These compartments which transport and deliver petroleum products are required to be calibrated and sealed because they are themselves measuring devices. The calibration fluid that is used at our laboratory to calibrate these devices is contained in underground storage tanks and is then returned to the underground storage tank after calibration. The product that is used to calibrate leaded compartments, therefore, becomes contaminated with lead, and it will be necessary for us to install a 15,000 gallon storage tank at the Calibration Station at 1210 Western Boulevard, Raleigh, North Carolina, together with separate piping for use in calibrating non-leaded compartments. This installation will cost \$5,500.

c. Automatic Adoption of Rules, Regulations, Specifications and Tolerances of National Conference of Weights and Measures

The National Conference of Weights and Measures is a body of great eminence. It rarely errs. North Carolina is a member of this Conference, which is composed of Weights and Measures officials from all across the United States. Through the years, North Carolina Weights and Measures officials have taken an active part in this body and are respected members of the Conference. We must continue this membership. Nevertheless, North Carolina and the entire South are in the minority in the Conference because of the dense population of other areas of the United States. The citizens of North Carolina are therefore automatically subjected to law without the usual and final right of review by its elected representatives. We plan therefore to ask that the Legislature amend Section 33 of Chapter 119 of the General Statutes by deleting in Lines 10 and 11, "and approved by the National Bureau of Standards." This is meaningless as the Bureau does not approve or disapprove rules, regulations, definitions, or tolerances. In line 10 of Section 33 of Chapter 119, add "and approved by the North Carolina Board of Agriculture."

d. Wilmington Calibration Station

The Wilmington Calibration Station which is used to calibrate all black oil vehicle tank compartments used in the state and other petroleum vehicles in the Wilmington area is now obsolete. It was built in 1941. Since 1941, the length of the vehicles being calibrated has increased. It is not possible to use the station now as intended. The vehicles must be backed in with the cab of the vehicle remaining in the street right-of-way. It is located in a residential area, and we have received some complaints from residents in that area regarding the presence of vehicles that might possibly present a fire hazard. Water is used at this Calibration Station as the calibration fluid. This water may not be put into the city sewer system because of the fire hazard and now has to be hauled outside the city limits and dumped. A new facility designed for present day petroleum transports would increase the number of inspections at this installation and would eliminate the other problems previously mentioned. We will ask the Legislature for permission to build this facility at some other location, preferably in the vicinity of the State Ports Authority. See attached Department of Administration Form DA-P-105 (Rev. 10-69).

STATE OF NORTH CAROLINA
DEPARTMENT OF ADMINISTRATION
RALEIGH

PROPOSED CAPITAL IMPROVEMENT PROJECT
FOR THE BIENNIUM OF 19____-19____

Institution or Agency N.C. Department of Agriculture Date February 4, 1974

1. Project Name or Identification, and Location Calibration Station, Gasoline and Oil
Inspection, Wilmington, North Carolina

2. Proposed Use or Occupancy:—(Attach additional data as necessary to indicate size and function of desired spaces)
To be used as Calibration Station to replace present Calibration Station now located at Fourth and Kidder Streets, Wilmington, N. C. Replacement necessary due to inability to calibrate petroleum transport trucks because of their larger capacities and lengths. Present facility built in 1941. Approximately two (2) acres are needed to construct and operate this facility in a proper manner. Building should be 30 feet long, 15 feet deep, and 10 feet high and should be of 8 inch solid brick in order to support the 5 test measures which are to be located on top of building; a driveway which must be perfectly level of concrete with a minimum width of 10 feet wide with 6 inch curb on each side of approximately 2 inches in height and 120 feet in length. Driveway to be of such strength so as to be able to support without breaking or cracking when a petroleum transport loaded with 9,000 gallons of petroleum is transported over same. Effort is being made to arrange with the Ports Authority a location of this facility on their property because of its convenience to the petroleum transport industries in the immediate area. If this cannot be arranged, property is available in the area at a cost of approximately \$11,000 an acre or a total of \$22,000 for 2 acres needed for the facility.

3. Utility Services:—(If special building mechanical or electrical services are required please so indicate, together with approximate distance to existing water, sewer, electrical, or other utility services)

No special electrical or sewer services needed. A 3 inch water service will be needed to building in order to fill the test measures located on top of building. Distance to such service is approximately 80 feet.

4. Physical and Cost Data:—

A. Area Data

(1) New construction:

Gross Area 240 Square feet

(2) Renovation:

Gross Area _____ Square feet

B. Equipment (As determined by requesting Agency)

(1) Fixed Equipment

Estimated total cost \$ 4,050.

(Lab benches, food service,
special purpose equip., etc.)

(2) Movable Equipment

Estimated total cost \$ 600.

(Furniture, movable items, etc.)

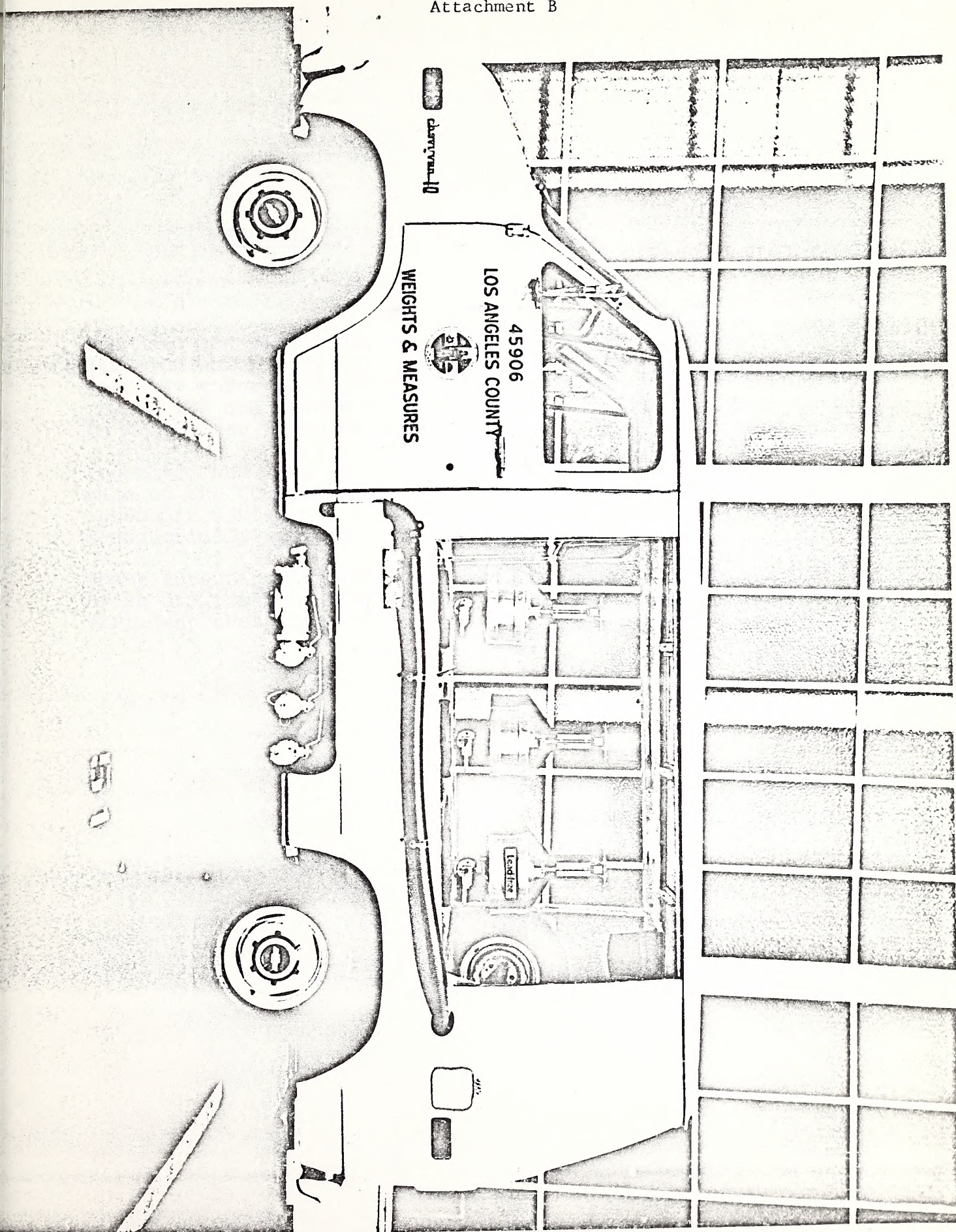
(fill in if Agency has Governing Board.)

Action, recommending the above request, was taken by the Governing Board of _____

_____ on (date) _____ and is recorded
in the minutes thereof.

e. Excessive Time and Manual Labor of Gasoline
and Oil Inspector's Work

Each inspector is equipped with a five gallon test measure. After each draft while inspecting a dispenser, he must return this test measure full of product to the storage tank. At the present time, each inspector is running a minimum of twenty gallons of product through each dispenser. This process is hard work, it is time consuming, and it keeps the dispenser tied up while this process is taking place. Larger storage facilities are being installed at retail outlets, at distances further from the dispensers than before. This trend accents the problem. During the 1975-77 biennium, we plan to ask for an appropriation of \$7,500 to purchase and equip a vehicle especially designed for inspection purposes. This vehicle will greatly increase our efficiency. Once put into use, this vehicle will reduce our cost per inspection. We plan to put this vehicle into service in the Charlotte area and then expand into other metropolitan areas as indicated by the Charlotte results. The cost of this vehicle and the equipment will be \$7,000. For a photograph of this type vehicle, see Attachment B.



SEED AND FERTILIZER PROGRAM

The Seed and Fertilizer Division is a newly organized division which combines seed analysis, seed inspection, seed law enforcement, fertilizer registration, fertilizer inspection and assessment of penalties for short ingredients in fertilizer formulations.

Together, the seed and fertilizer regulatory activities make up the fundamental consumer protection format of the agronomic activities in the department. The programs are statutorially assigned and prescribed.

These sub-units have been combined with the objective of cross utilization, where possible, of personnel and more efficient operation.

SEED TESTING SUBPROGRAM (BUDGET PAGE F-36)I. PROGRAM DEFINITIONPurpose

To assure complete and truthful representation of the planting quality of seeds offered to all seed buyers or consumers in the state.

Means and Methods Used to Achieve the Purpose

1. Statutes requiring the form and content of seed identification and quality labeling are kept updated commensurate with improved analytical techniques and in reasonable uniformity with national model laws and the Federal Seed Act.

Updated regulations are presented to the North Carolina Board of Agriculture for promulgation, to more effectively carry out the enforcement of the statutory requirements.

- 2.a. Seed specialists (six now employed) review seed stocks exposed for sale by 4,000 seed distributors in the state. (They live in and work six inspection districts). These specialists are trained in seed quality analysis and make observations of the physical quality and satisfactory labeling of that quality on the site of inspection. Obvious violations result in immediate stop-sale orders on the site. Samples which support stop-sale orders are forwarded to the central laboratory for confirmation. Samples are held in evidence of the violation at the central office. Follow-up procedures are directed from the central office, which include instructions for bringing the lot of seeds into compliance with the N. C. Seed Law, or the subsequent removal of the seeds from the market.

Random inspection samples are sent routinely to the seed laboratory for evaluation of viability (germination) to assure that this quality is being truthfully represented. Stop-sale orders are made on lots misrepresented for viability.

Field verification plots are planted annually for tobacco and hybrid corn, and in random years for wheat, oats, barley, rye, sorghum, and soybeans to verify variety and cytoplasm identity.

Records of seed distribution, required by statute and subject to inspection, are reviewed to assist in recall of seed lots of substandard quality.

- b. The official state seed testing laboratory is centrally maintained and staffed for the purpose of verifying the label claims of seed quality, to provide information of planting quality to North Carolina citizens for planting purposes, to seedsmen for labeling purposes, to certified seed growers to determine if seeds meet seed certification standards, and to state agencies (such as the Landscape Division, Department of Transportation) to verify that seeds supplied on state contract meet state bid specifications.
- c. The seed law and regulations require the recording of all tobacco varieties, corn hybrids, and blends of any kinds of seeds as a prerequisite to their lawful sale.

History

Legislation has required seed quality labeling since 1921. There has been constant updating of the statutes as changing seed distribution patterns, improved analytical procedures, and new problems have required.

Statutory Authority

Article 31, Chapter 106, establishes the requirements of law and authorizes the North Carolina Commissioner of Agriculture to enforce the statutes. North Carolina Department of Agriculture Regulations, Chapter VII, establishes the procedures under which the enforcement of the statutes are implemented.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Changing needs of agriculture require changing seed testing program. Analytical procedures used nationwide (and world-wide) to measure seed quality have evolved slowly, and have been generally out-distanced by the changing techniques and economic pressures of crop production. This is most especially true in the measurements of seed viability (germination). This results in an inadequacy of the present program to serve the needs of modern crop production.

Germination tests are made by growing seedlings of representative samples under optimum conditions in controlled environmental chambers (germinators). The results of these tests do not correlate adequately with field performance of the seeds, where environmental conditions are often less than optimum.

To make the problem more acute, it is generally held that testing techniques must be limited to those which are widely accepted as uniform procedures. This is to prevent non-uniform testing procedures becoming barriers to seed marketing. There is some justification to this for seeds which move long distances, under regulations of several states and under federal regulations. The current procedures are legitimized under the standards approved by the Association of Official Seed Analysts, and all seed marketing and labeling requirements are tied to those standards.

New techniques are reaching the threshold of acceptance. The N.C. Department of Agriculture is engaged in referee trials designed to standardize and unify new procedures which will become the standards on which seed marketing and labeling will be reoriented.

Within the time limit of this plan of work, it is expected that the major field crops in the state will be marketed on test information derived from different procedures than those in use today. These are likely to be bio-chemical tests, and modified germination tests, usually referred to as "cold tests" and "accelerated aging" tests.

A necessary input into this development will be the required equipment for environmental control. The present seed testing facilities are too limited in space and equipment to fully serve assigned responsibilities. Expansion into adjoining space is anticipated. Also, the addition of walk-in germinator space is planned in the renovation and expansion. This is scheduled to take place in 1977-78 and will cost approximately \$40,000.

Response: The seed program will be reoriented, through the use of necessary equipment and part-time personnel, to implement new test procedures and labeling requirements.

III. PLAN FOR THE 1975-77 BIENNIIUM

| | <u>Indicators of Expected Accomplishments</u> | | | |
|---------------------------------------------|-----------------------------------------------|------------------------|------------------------|------------------------|
| | <u>72-73</u> 12,150 | <u>73-74</u> 12,000 | <u>74-75</u> 12,000 | <u>75-76</u> 12,000 |
| Seed Lot Inspections | | | | <u>76-77</u> 12,000 |
| Laboratory Samples Received | 25,465 | 24,302 | 24,000 | 24,000 |
| Separate Analyses Made | 32,018 | 31,300 | 31,000 | 31,000 |
| Seed Lots Found in Violation of Seed Law | 447 | 537 | 500 | 500 |
| Variety Verification Samples Planted | 477 | 807 | 600 | 600 |
| Seedsman Registered | 3,980 | 4,040 | 4,000 | 4,000 |
| Hybrids or Varieties Recorded | 322 | 348 | 350 | 350 |

These indicators reflect the workload consistent with resources available. They represent procedures required by statutes, and which cannot be curtailed or diminished in keeping with those statutory responsibilities.

Analysis of Major Changes Proposeda. Implementation of New Testing Techniques

The program will reflect the implementation of new techniques in measuring seed viability. This will be done by the addition of temporary personnel (3 persons) during peak testing periods for summer annual crops. Corn, peanuts, soybeans, and cotton will receive emphasis for more refined evaluation. Each temporary employee will be needed approximately six months (November - April). These employees will perform the more routine laboratory work, which will allow trained analysts to concentrate their time on the more refined techniques of new methods. Costs are anticipated to be \$7,500 annually.

Alternatives include a continuation of the present program design, which is inadequate. It is not necessary to employ permanent employees, since the major crops to be more thoroughly reviewed are tested during the proposed part-time employment. The present permanent staff can handle the requirements of testing cereal grains, grasses, small seeded legumes, and vegetables which make up the remainder of the years' schedules.

This one improvement is the most significant need today in seed testing for marketing purposes. Upgrading seed quality available to farmers of the state and increased efficiency of production will result from this reorientation.

FERTILIZER SUBPROGRAM (BUDGET PAGE F-27)I. PROGRAM DEFINITIONPurpose

To insure the consumer and industry of honest and legitimate goods. It is primarily a law of labeling, registration, and analysis control to assure that the consumer is getting quality products in order to insure ample production of food and fiber. This subprogram encompasses two laws: the North Carolina Fertilizer Law and the North Carolina Lime and Landplaster Law.

Means and Methods Used to Achieve the Purpose

1. We monitor approximately 10 percent of the two million tons of fertilizer sold in this state annually by collecting approximately 10,000 samples.
2. There are heavy monetary penalties for short analysis goods, while other violations of the law are misdemeanors.
3. Licenses are issued to companies registering fertilizer.
4. The field force at present is two permanent and up to twelve temporary inspectors.
5. Analyze samples to check for compliance.
6. Register approximately 3,000 grades annually from about 150 different companies.
7. Assess penalties on deficit analysis samples.
8. Publish annual fertilizer report showing results of each year's work.
9. Investigate complaints from consumers throughout the state.
10. Approve labeling to be used on products.

History and Statutory Authority

The program began around the turn of the century with the first State Chemist being employed in 1901. His duties were to carry out the provisions of the North Carolina Fertilizer Law. This program is strictly a state program with no other agency, state or federal, involved. The statutory authority is Article 2, Chapter 106 and Article 8, Chapter 106 of the General Statutes of North Carolina.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Need for surveillance and line sampling of fertilizer and liming materials. Presently, fertilizer inspection and sampling is done on a seasonal basis by part-time inspectors. 1974 has brought about changes in the fertilizer industry due to shortages and high costs of materials that have changed marketing patterns significantly. Fertilizer is being marketed more consistently throughout the year than ever before. The use of temporary inspectors has not allowed us to maintain adequate surveillance of the movement of small package, garden and lawn, household, and turf fertilizers. These products have become increasingly important to the consumer and necessitate adequate regulatory control. The movement of fertilizer materials is anticipated to be centered around a three to four month period in the spring requiring concentrated regulatory effort during this portion of the year.

Response: Two full-time inspectors will be added to the inspection force in an effort to provide adequate surveillance of fertilizer materials throughout the year. These will be in addition to the temporary inspectors who will continue to be used on a seasonal basis during the peak fertilizer sales season.

- b. Problem: Laws prohibiting sale of products that are desirable to household plant growers. The present law requires that any mixed fertilizer sold in North Carolina must have a minimum of 20 percent plant food. Growers of household plants, such as African Violets, cannot use a fertilizer of this strength on this type of plant. There are products manufactured and available to North Carolina consumers that are specifically developed for the purpose desired by household plant growers.

Response: A change in the law will be requested to allow any grade of household plant food to be registered and sold in packages of 16 ounces or less.

- c. Problem: Inadequate penalties on small package fertilizer. Presently, the penalty structure on fertilizer is established primarily to protect the farmer or users of large-size packages of fertilizer. The present system is constructed so that should we desire to sample a small lot of small packages, the penalty would not be great enough to pay the cost of the sample. This does not take into consideration any of the other expenses involved in laboratory assignments or analytical work. Small containers normally sell at a premium price; therefore, economics dictate that these materials should be accurate as labeled.

Response: The legislature will be requested to establish a minimum \$50.00 penalty on all fertilizer packages of less than 50 pounds weight.

III. PLAN FOR THE 1975-77 BIENNIIUM

Indicators of Expected Accomplishments

| Item | 1972-73 | 1973-74 | 1974-75 | 1975-76 | 1976-77 |
|--------------------------------------------------------------|------------|------------|------------|------------|------------|
| Average Number of Employees | 29.5 | 28.5 | 30.5 | 30.5 | 30.5 |
| Products Registered | 3,278 | 3,300 | 3,400 | 3,400 | 3,400 |
| Inspections Made | 5,158 | 5,300 | 5,500 | 5,500 | 5,500 |
| Official Samples Obtained | 9,693 | 10,100 | 10,100 | 10,100 | 10,100 |
| Unofficial Samples Obtained | 17 | 15 | 5 | 5 | 5 |
| Official Liming Material and Landplaster Samples Obtained | 200 | 250 | 300 | 300 | 300 |
| Analytical Determinations | 95,373 | 95,400 | 96,000 | 96,000 | 96,000 |
| Adulterated Samples | 3,721 | 3,750 | 3,750 | 4,000 | 4,000 |
| Stop Sales Issued (Misbranding and Non-Registration) | 150 | 150 | 150 | 150 | 150 |
| Samples Penalized | 3,719 | 3,720 | 3,750 | 3,750 | 3,750 |
| Total Amount of Penalties Assessed | \$ 188,272 | \$ 195,000 | \$ 240,000 | \$ 240,000 | \$ 240,000 |
| Amount Paid to Users | 36,464 | 38,000 | 50,000 | 50,000 | 50,000 |
| Amount Imprest | 151,808 | 153,000 | 190,000 | 190,000 | 190,000 |
| Total Tonnage Sold | 1,747,191 | 1,900,000 | 2,000,000 | 2,000,000 | 2,000,000 |

The two new inspectors requested would replace two temporary inspectors, and plans are to maintain the present rate of sampling. This would give needed coverage year round. We anticipate that it would increase the number of inspections made each year, but not samples taken.

The laboratory analyses of fertilizer will continue according to AOAC procedures which are prescribed by law. Sixteen permanent and three to four temporary chemists will provide these analytical services. Efforts will be made to provide rapid laboratory response to adequately convey the fertilizer quality situation to all levels of agriculture.

Analysis of Major Changes Proposed

a. Year Round Sampling

Due to drastic changes in the marketing patterns of fertilizer in 1974 and for the foreseeable future, a different approach to inspection must be sought. Limited fertilizer supplies at higher costs have resulted in year round movement of fertilizer which requires continual surveillance. Two year round inspectors will be needed to provide adequate surveillance of fertilizer materials. This will be in addition to the seasonal inspectors in present use. This approach will more adequately meet the needs of the agricultural community in assuring that fertilizer materials comply with present laws and regulations. These administrative changes would be at an annual cost of \$25,000 and would result in a higher level of effectiveness in the fertilizer program.

b. Suggested Legislation

The present fertilizer law requires a minimum of 20 percent plant food in fertilizer sold in North Carolina. Growers of household plants must dilute fertilizers at this strength in order to use them for certain plants. Products are available in diluted form which could adequately meet the needs of this particular specialized fertilizer market. Legislation is anticipated which will allow low analysis fertilizers to be sold in small containers of less than 1 pound. This legislation will allow the type of fertilizer materials that can best be used by growers of African Violets and other

household plants. This particular change must be made in the law in order that lower fertilizer grades may legally be sold in the State of North Carolina. There are no costs associated with this change.

c. Suggested Legislation

The present penalty system is set up to control large packages of fertilizer. There is a sizeable amount of small package fertilizer being sold in North Carolina, and it expands each year. If we were to sample a lot of twenty 3-ounce packages of fertilizer and find a deficiency, the penalty would be only a matter of a few cents, while penalties on large lots of fertilizer are often in the thousands of dollars. This needs to be changed in order that there will be the same quality control on small package fertilizer. A minimum penalty of \$50 on small package fertilizer will be proposed to the legislature to provide for better quality control on this rapidly increasing business which produces many thousands of dollars annually to the industry. There would be no additional cost to the state. This cannot be handled by regulation and will require action by the legislature. No other programs would be affected. The minimum penalty of \$50 was determined to most adequately represent the cost of administering this phase of the program.

RESEARCH STATIONS PROGRAM (BUDGET PAGE F-38)I. PROGRAM DEFINITIONPurpose

To develop new varieties, techniques, schemes, etc. of production which will make farming more efficient, productive, and profitable and will in the long run, benefit the consumer through lower prices and higher quality products. These goals and objectives are met through a joint effort with the N. C. Agricultural Experiment Station at N. C. State University and USDA in which this division is charged with the responsibility for maintaining and supervising the administration and operation of the research stations.

NOTE: Agricultural research in North Carolina is a joint endeavor undertaken by the NCDA, N. C. Agricultural Experiment Station at North Carolina State University, and with cooperation from USDA. It should be emphasized that each agency makes significant contributions; no one agency is autonomous; agricultural research in North Carolina is a team effort. The team effort concept is shown vividly by the structure and contributions made by the various agencies. The Division of Research Stations of the NCDA contributes by supervising the administration and operation of all 15 outlying research stations and by owning and funding nine of those outlying stations. The N. C. Agricultural Experiment Station at N. C. State University owns and funds six of those stations, and provides project leaders that conduct research on all the outlying stations. USDA contributes by providing some funds and project leaders, but the major emphasis for agricultural research in North Carolina is contributed by the N. C. Agricultural Experiment Station at N. C. State University and the N. C. Department of Agriculture.

Means and Methods Used to Achieve the Purpose

1. By providing outlying research stations and physical facilities for conducting field research, project leaders will have field laboratories for investigation of problems in field crops, forages, horticultural crops, swine, beef and dairy cattle, poultry, and other animal life. These facilities also will allow scientists to seek better varieties, strains, etc., to advance production potential in North Carolina. These stations, it should be noted, are located throughout the state, and this provides for an environment that more nearly meets conditions of problems and production areas of our state.
2. Providing operational manpower and supervision for managing all 15 outlying research stations.
3. Use of latest technology in producing field crops, forages, animals, pastures, etc. while conducting research on the outlying research stations. These practices provide a pictorial display for farmers and others to view and visually learn what can be accomplished by adapting recommended practices as suggested by scientists of the Agricultural Experiment Station at N. C. State University.
4. Research stations are often used as sites for training and educational centers. 4-H, FFA groups, farmers and agri-business people often meet on stations for judging contests, field days, and individual visits for information on latest suggested programs and practices for production of food and fiber.

History

The NCDA and the N. C. Agricultural Experiment Station have cooperated since 1877, and the concept of outlying research stations has been in effect since 1885. The program began to fully develop in the early 1900's and has expanded to its present system.

Statutory Authority

Chapter 106, Article 1

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Lack of adequate resources to properly conduct and support agricultural field research. Research with some subject matter areas is presently underway, but due to insufficient resources, some problems cannot be fully and thoroughly investigated. Some new projects are needed and have been requested, but adequate resources are not available to support subject requests. Further, greater flexibility is needed to respond properly and timely to changes within agricultural technology. Agricultural research is becoming more complex, sophisticated, and demanding. Moreover, changes are occurring more rapidly. Many farmers are going out of business; accordingly, those farmers remaining are becoming larger and larger operators. The need therefore for more and more field research is evident, and that trend will intensify. As technology becomes more sophisticated, research to answer questions related thereto will require more elaborate resources to meet the demands of project leaders.

In order to provide adequate security for research projects and the needed availability of supervisory personnel at Oxford Tobacco Research Station and upper coastal plain Research Station, suitable living quarters should be provided for these key employees.

At Horticultural Crop Research Station, Clinton, for years it has been necessary for some adjoining property owners to use a farm road situated near the center of the research area. In order to avoid possible interference with sensitive research, we recommend that a road be provided near the property line.

Response: Provide sufficient resources to properly meet the needs of agricultural field research.

1. Seek legislative permission to establish new personnel positions to meet competent manpower needs for outlying research station programs.
2. Provide adequate support for Capital Improvement necessities including structures, land, and other related items.
3. Obtain and provide adequate equipment, operating monies, and regulations governing station activities.

III.

PLAN FOR 1975-77 BIENNIUM

This program is an integrated effort with other agencies; however, the primary responsibility of this division is to provide and maintain resources and facilities to support field research; therefore, statistical indicators are not available to clearly point out the Division's accomplishments.

Analysis of Major Changes Proposeda. Tidewater Research Station

During the past two years two feed storage bins have been installed, and plans for the Swine Research Center were put in motion. The Swine Center is now in operation, but due to inflationary prices, final steps in the completion of the waste disposal system and the feed handling system were not completed.

1. The wide variety of field crops common to the Tidewater area has created a large increase in requests for plot land. Further, expanded research in swine and beef cattle during the next two years will require considerably more land to support the feed grain needs of the program. By clearing 200 acres of good land now, presently owned by the department, it will be possible to satisfy subject needs in an economical way. The cost related to this land preparation will be \$80,000. Legislative action is required for funds to support this project. Purchase of open land adjacent to the station may be possible, but the cost would be prohibitive. The critical need for this additional land indicates that this item should be included in 1975-76 funding.
2. Farmers in the northeastern section of the station demonstrated a need for an agronomist to be stationed in the area. The 1974 legislature recognized the need and established a position. It was determined that the Tidewater Research Station was the logical place for headquarters. Arrangements for temporary space can be made, but an addition to the existing office building will be necessary to provide a permanent suitable office

facility. By an addition to the present station office, the present research station staff can support the position with secretarial service and provide reasonable means for proper communications. The cost involved in subject effort is approximately \$36,000, and legislative approval is requested. Rented public office space was discussed, but due to the aforementioned advantages and the cost involved, the idea was rejected. This office space is badly needed, but can be placed in 1976-77 budget.

b. Oxford Tobacco Research Station

During the past biennium, tobacco research has expanded at this station. Most of the increased research deals with harvesting and curing methods. As a result of this special program, it has been necessary to increase acreage devoted to tobacco research by about 20%.

1. Harvesting and curing of tobacco is rapidly moving toward mechanical and bulk systems. This trend is due to larger farming units and a decreased supply of labor. A new mechanical harvester has been provided this station, and in order to provide needed information concerning economical labor saving curing methods, it is necessary to install a bulk curing system at this station. The funding requested for this purpose is \$31,000. The necessary legislative and administrative effort is urged to provide and to accomplish subject objective. It is essential that reliable data be provided farm leaders concerning curing methods; therefore, it seems no viable alternative is available to providing the required equipment. Need for this curing system is great and should be included in 1975-76 appropriation.
2. Several pieces of rather large and sophisticated harvesting equipment are now available for use at this station. Present storage space will not properly protect this expensive equipment. In order for this equipment to give good service over a long period of time, it is necessary to construct suitable shelter space. Estimated cost is \$24,000, and legislative action is needed. We recommend this storage space be placed in 1976-77 Budget request.

c. Upper Coastal Plain Research Station

A real productive and much used demonstrational and teaching program has developed in the past two years at the swine center. Extension agents, vocational teachers, technical school people, 4-H clubs, and many other groups and individuals have visited and used subject facilities to support improvement of the swine industry of North Carolina.

1. When this Swine Center was built, inadequate funds were provided to build a finishing building large enough to care for the total pig production. To eliminate the necessity for selling approximately one half the pig production as feeder pigs and to follow the original plan for finishing the total pig crop, a need for completing the finishing building is acute. The cost for the proposed construction will be \$20,000, and legislative action is needed. To continue as now operating will not conform to the plan for this project and therefore reduce significantly its total effectiveness. In order to complete the facilities for this planned project, this building should be included in 1975-76 Budget.
2. The increased volume in this swine program, as well as the cow-calf program, requires that additional grain storage be provided, with an adequate drying system. To provide a more accurate and economical system for feeding, additional feed handling equipment must be purchased. The cost of these facilities will be \$28,000. Legislative action is needed to implement this important addition to the station's program. To provide much needed facilities for handling the increased quantities of grain this item should be placed in 1975-76 Budget.
3. Some large equipment is now used at the station and storage space available will not accommodate some of the larger and more expensive units. To protect the equipment, thereby prolonging its usefulness, an additional suitable shelter is needed. The funding needed for this shelter is approximately \$12,000, and legislative action is needed. This storage space is needed, but can be placed in 1976-77 Budget.

d. Upper Mountain Research Station

Research involving beef cattle, sheep, burley tobacco, and forage crops continues to be the main thrust of effort at this station.

1. Projects to intensify and broaden the beef cattle research have been planned. In order to develop more dependable data on winter feeding trials, a cattle barn, silo, and feed distribution system is needed. Cost of this project will be \$31,000. Without improvement in this area, the program at this station is limited since facilities for separating younger animals whose nutritional requirements differ from mature animals are not available. In order to conduct the research planned for this station, this building is necessary and should be in 1975-76 Budget.

e. Horticultural Crops Research Station

Development of this relatively new research station is progressing nicely. Improvements in the pond and land conditioning on the north side of the station are going well. A sweet potato and vegetable processing building has been added. Interest in horticultural crops at this station is very evident because of public interest displayed in work at this station.

1. Competent farm labor is very difficult to obtain. This fact has intensified movement toward mechanization. In order to protect the sizeable investment in large equipment, an equipment storage shed 32' x 100' is needed. The cost of this building will be approximately \$18,000 and legislative action is requested. We request this building in Fiscal Year 1976-77.
2. With increased interest in vegetable crops, both commercially grown and for home use, the need for more good research land at this station is present. Suitable land for expansion is available, but clearing and conditioning is necessary. Thirty-five acres should be cleared as soon as possible. Cost for this project is estimated at approximately \$15,000, and legislative funding is needed. Purchasing additional land for immediate use

would be impractical because of excessive cost. Due to the demand for plot land at this station, we request funds for this work in Fiscal year 1975-76.

f. Piedmont Research Station

Important activity has occurred at Piedmont in the last two years. The beef cattle handling facility was rebuilt by station personnel, a new bull testing station has been completed, and plans are underway to start construction of a new dairy facility and two environmental houses for the Random Sample Poultry Test.

1. Over 100 tons of fertilizer is required for this station annually. The present facility used for fertilizer storage has a ground level dirt floor which is often damp, and therefore is not suitable for fertilizer storage. By providing a dry building, proper storage could be maintained, and requirements could be purchased much earlier in the year and thus be able to obtain desired formulas at much more favorable prices. The cost of this building will be approximately \$22,000, and legislative action is needed. Due to increasing difficulty in the supply situation, failure to provide proper storage space will only make the present problem more difficult. We strongly recommend this building for Fiscal year 1975-76.
2. Since all poultry research conducted on the outlying research stations is carried on at Piedmont, further renovation and modernization of five existing poultry houses must be done. Poultry is a large and vital segment of the agricultural economy of North Carolina, and the responsibility for providing reliable proven research data relating to current problems in the poultry industry is upon this Division. Renovation of five existing poultry houses is necessary to provide needed services to the poultry industry. The estimated cost for this project is \$108,000 and will require legislative action. This project should be included in 1975-76 Budget request.

3. More intensified and sophisticated research in dairy cattle, beef cattle, poultry, and forage crops is underway at this station, and to properly supervise and handle these research projects, three agricultural research positions should be added to the station staff. The cost for the 1975-77 biennium will be \$62,180. Failure to provide qualified personnel to handle research data is extremely costly in terms of valid dependable information obtained. Additional qualified personnel are essential at this station and should be provided in 1975-76 Budget.

g. Peanut Belt Research Station

Research at this station for the past two years has been very productive for the state's peanut growers. However, a very serious problem developed two years ago when black root rot was found in northeastern North Carolina. This is a serious disease and demanded immediate attention. Studies concerning this problem continue.

1. The station's machinery storage area and the shop area are grossly inadequate. Present facilities do not approach OSHA standards. In order to provide employees with acceptable working conditions and suitable equipment storage space, a new shop area with rest room and shower should be provided. The estimated cost of such a building is \$32,000 and will require legislative action. This building is urgently needed and should be included in 1975-76 Budget.
2. Approximately 50,000 pounds of peanuts are produced in research projects which require peanuts be stored for extended periods. A suitable storage building for this specific purpose should be provided in order for the best possible data to be recorded. \$28,000 will be needed for this project and legislative action is required. This facility is important to the research program, but we suggest it be provided for in Fiscal year 1976-77.

3. The availability of nitrogen solutions is not good in this general area. This fact and the limited supply situation require that in order to be able to apply this nutrient to crops when needed, a 5000 gallon liquid nitrogen storage tank is very necessary. The cost of this item is approximately \$3,250.00. Funds should be provided for this as soon as possible. We request this item in Fiscal year 1975-76.

h. Border Belt Tobacco Research Station

This research station is a very important center for tobacco research in the Border Belt area of southeastern North Carolina. To provide factual information in curing and handling tobacco at harvesting time, a bulk curing system is needed. The cost of this change will be approximately \$40,000. Information must be supplied to the extension and vocational agricultural people regarding this important phase of tobacco production; therefore, it is essential that a bulk curing system be provided to satisfy this legitimate need. This curing system is essential and should be provided in 1975-76.

i. Mountain Research Station

Moving all dairy cattle to Piedmont Research Station and the increased importance of horticultural crops to Haywood and surrounding counties, have caused considerable change in research effort at this station the past two years. Also, the need for a more suitable packhouse for burley tobacco was met by converting, with station labor, an existing dairy building. With the placement of a full time tobacco specialist at the station, tobacco research is expected to expand considerably. The increased quantities of fertilizer, chemicals, and labor required for this expanded research will necessitate \$32,000 added to the operating budget to provide proper support. With the changing and expanded programs at this station, these funds are needed in Fiscal year 1975-76.

Outlined above are the aspirations of this Division for the 1975-77 biennium. Significantly, additional operating funds will be necessary to meet the objectives planned. It is anticipated that an increase of \$50,000 in 1975-76 and \$60,000 in 1976-77 in supplies and materials is needed. Further, an increase in motor vehicles of \$18,000 in 1975-76 and \$20,000 in 1976-77 as well as other significant amounts for other line items will be required. As noted earlier, the agricultural industry is changing rapidly, and new problems surface often; therefore funds and other essentials will be necessary to meet the changing needs of agriculture and to properly and timely respond to the requirements of this vital North Carolina industry.

NORTH CAROLINA STATE FAIR PROGRAM (BUDGET PAGE F-39)I. PROGRAM DEFINITIONPurpose

To present the annual North Carolina State Fair, which includes agricultural exhibits, industrial exhibits, educational exhibits, and entertainment features, for the enlightenment and enjoyment of the general public. To provide buildings and grounds for the activities of organizations and individuals such as civic club projects, entertainment events, trade shows, picnics, and other events that require buildings with large areas for their activities. To maintain all buildings and properties so that they are readily available and can be utilized to the maximum.

Means and Methods Used to Achieve the Purpose

1. To periodically review the Program and make necessary changes that will reflect the progress and development of new ideas and ways exhibitors may be more effective in their presentations of programs.
2. Study present needs and future needs and plan for the development, growth, and expansion of present facilities.
3. Improve the present facilities.
4. Establish training programs for all employees to make them aware of safety, good public relations, improved work methods, new products available for their use, and equipment that must be properly used and maintained.
5. Review the Rules and Regulations governing the operations of the buildings and grounds.
6. Provide information for those who request it regarding the rental, use, or events held here at the Fairgrounds.
7. Publicize and promote both the events and facilities that are here for the use of the public.

Administrative Structure

The Program is administered by the Manager of the Fair. He is responsible to the Commissioner of Agriculture and the Board of Agriculture in carrying out the program. The Administrative Staff consists of Manager, Assistant Manager, Administrative Officer, Budget Officer, and a Steno II. The maintenance of the buildings and grounds is supervised by Maintenance Mechanic IV, who has eleven (11) permanent employees. The full staff at the present time is seventeen (17).

History

The North Carolina Agricultural Society founded the Fair. The first Fair was held in October 1853, on New Bern Avenue, at what is now the Department of Motor Vehicles. It later moved across from what is now the North Carolina State University in 1873 and stayed there until it was moved to its present site in 1928. The North Carolina Agricultural Society disbanded, and the Fair was placed under the Department of Agriculture in 1930. There followed a period when the Fair was leased out to different organizations and groups, and finally, returned to the North Carolina State Fair in 1937. The Fair is a Division of the Department of Agriculture, which is under the Commissioner of Agriculture and the Board of Agriculture. All Rules and Regulations are submitted to the Board of Agriculture for their approval prior to an enactment.

Statutory Authority

G. S. 106-503; G. S. 106-520.

II. FIVE YEAR PLANNING PERSPECTIVE

- a. Problem/Trends: Need for facilities to hold the annual Fair and the many events during non-fair time. The attached survey shows the need for buildings. Even after the completion of the Livestock Pavilion, Old Village of Yesteryear Crafts Building, already underway, the needs for the Fair will be only partially taken care of.

The Art Exhibit is held in an old building. The large Agricultural Exhibits are in temporary structures leased for the Fair. Present needs are not met.

It is difficult to promote exhibits for the Fair if the exhibit area is not suitable. This has been a decided handicap in securing major exhibits for the Fair.

Response: In the long range plan for developing the Fair, there should be buildings for specific uses. For example, the agricultural building should have agricultural related exhibits with a comfortable, well-planned area for demonstrations that could vary from films on agricultural subjects like planting a garden to shearing a sheep. The Arts and Crafts building should have a small auditorium for musical contests and programs, areas for photography, painting, sculpturing, weaving, and so forth.

The Women's Building - a modern kitchen area for demonstrations in cooking, baking, etc. Other skills could be demonstrated such as refinishing furniture, sewing, needle work, and basic household repairs like repairing a faucet or painting a room.

In order to upgrade the Fair and bring in the participation and exhibits needed, buildings must be provided. These should be well-lighted, heated, ventilated, with restroom facilities. For the Fair to realize its full potential, it is necessary that we have a modern complex of adequate facilities. This will insure maximum use during the Fair and in non-fair time.

| RATING | No. of Bldgs. | IDENTIFICATION OF BUILDING | IMPROVEMENTS MADE OR SCHEDULED TO BE MADE |
|-----------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Poor | 1 | Lunch Stands | New concrete floors, have been put in. |
| Poor | 4 | Horse Stables ----- Poultry Bldg. I {to be demolished} Poultry Bldg. II {to be demolished} Shop (to be demolished) | New Roof and improvements \$18,000 |
| Poor | 9 | Grandstand Stage Cattle Barns ----- Commercial Building Educational Building Industrial Building Hobby & Crafts Building Rabbit Barn Sheep Grandstand | \$1.5 million New Livestock Pavilion. |
| Fair/poor | 2 | Kelly Building Village of Yesteryear ----- | New \$300,000 Building to be built. |
| Fair | 8 | Dorton Arena ----- House-Youth Center ----- Dorms-Youth Center ----- Lounge ----- Milking Parlor ----- P. R. House ----- Restrooms ----- | \$100,000 renovation. Improvements New beds. Repainted. Repainted. To be removed to the Youth Center area. Demolished because of construction of Scott Pavilion. |
| Fair/good | 1 | Dining Hall-Youth Center ----- | Repainted and \$25,000 addition. |
| Good | 1 | Wash rack for cattle | |
| New | 2 | Administration Office Large rest room at Education Bldg. | |

- b. Problem/Trends: Need for more agricultural exhibits that show the important relationship between the producer of food and fiber and the consumer. There is a trend towards larger commercial farms. Small farmers are shifting to part-time farming, supplementing their incomes from employment in industry. There is also a movement of people from cities and urban areas to rural areas. They have enough land to qualify as a farm yet produce no agricultural commodities.

The Fair, up to ten years ago, was a show place for the agricultural producer of live-stock, poultry, farm machinery, and household arts and crafts and homemaking skills, such as cooking, preserving food, baking, etc. But with the present day trend, the main objective is to tell consumers what agriculture means to them and how they can benefit by learning about products and services.

Response: Promote and encourage agricultural commodity groups to participate in the Fair. Help them develop attractively designed exhibits that will tell the story of their commodity from production to use by the consumer. Include notice of these exhibits in publicity material and encourage school age children to study them.

- c. Problem/Trends: Need to help exhibitors develop the techniques of creating interesting exhibits that will be entertaining as well as educational. There is more to a successful exhibit than displaying the product. The average Fairgoer will spend approximately ten seconds before an exhibit unless it captures his attention. Then there must be something to hold his interest. It must be something that will reward him in some way.

Perhaps the best method is a demonstration. For example: a poultry specialist demonstrates how to cut up a broiler and use the pieces for two meals, making money spent for food go farther.

Even with a static display, it helps to have people manning the display who are attractively dressed, neat in appearance, friendly, knowledgeable, and able to talk to people freely.

Response: The best way to insure a successful exhibit is through careful planning and organization. In the spring of 1975, we plan to hold a seminar for making plans for the 1976 Bi-Centennial Celebration at the Fair. This will be an excellent opportunity for a contrast between the old and modern ways of production. At this seminar, a specialist will lead the discussion on exhibit design. Committees will then carry the ideas to completion and execution.

- d. Problem/Trends: Need for a permanent year round exhibit of an early N.C. Farm House and Village Street. This would preserve some of the historical old farm and village buildings. At the present time, there are a number of old farm buildings that date back as far as the civil war. With the clearing of property for industry and expansion of people into rural areas, these buildings will be destroyed. They are available now and should be preserved. The problem is to locate the old store, schoolhouse, home, blacksmith shop, carriage house, barn, crib, and smokehouse. To plan and develop this section of the Fair is the first problem. To locate the needed structures, move them, repair, and landscape is another major job.

Response: A Heritage Circle as a permanent year round exhibit of the Fair is a part of the five year plan. The area has been designated and tentative plans for the area sketched. Professional help from Archives and History staff has been offered. This should be underway by October 1976.

III. PLAN FOR THE 1975-77 BIENNIUM

Indicators of Expected Accomplishments

| TYPE OF SERVICE | 1973 | 1974 | 1975 | 1976 |
|-----------------------------------------------|---------|---------------------|---------|---------|
| FAIR ATTENDANCE | 588,286 | 590,000 | 600,000 | 620,000 |
| NO. OF EXHIBITORS | 2,799 | 2,900 | 3,000 | 3,300 |
| NO. OF EXHIBITS | 9,649 | 10,000 | 11,000 | 12,000 |
| USE OF DORTON ARENA | 79 | to date/ 58/100 | 110 | 120 |
| USE OF SCOTT PAVILION (completed May 1974) | | to date/ 9/30 | 40 | 50 |
| USE OF OTHER BUILDINGS | 75 | to date/ 72/100 | 125 | 150 |
| USE OF GROUNDS | 30 | to date/ 29/40 | 50 | 55 |
| * TOTAL NO. OF DAYS USED | 196 | to date/ 166/200 | 200 | 225 |

*This does not include the 9 day fair held in October.

STATE FARMERS MARKET PROGRAM (BUDGET PAGE F-17)I. PROGRAM DEFINITIONPurpose

To expand marketing services to farmers, to do experimental work in the use of marketing equipment, to extensively study this type of market for farm produce, and to educate the farmers on the best marketing methods for quality products including grading, sizing, packaging, etc.

Means and Methods Used to Achieve the Purpose

1. Providing facilities in a centrally located area where farm producers, wholesalers, retailers, and consumers can meet and transact business.
2. Providing assistance to farm producers in selecting commodities to grow which are in greatest demand.
3. Advising the farm producers as to proper grading, packaging, and care of the products in order for them to receive top prices for their produce.
4. Furnishing the news media daily information as to prices, supply, and demand of farm produce.
5. Assisting persons interested in establishing similar types of markets in other parts of the state by making available to them information as to overall operations, problems, and needs of such a facility.

Administrative Structure

The Market is a self-supporting program operating from funds generated by wholesale terminal leases, retail seller leases, and gate receipts. Permanent management consists of the Market Manager and one secretary. Part-time help is utilized for the remaining labor force. The Markets Division of the N. C. Department of Agriculture provides the services of one of its marketing specialists to aid the farmers and producers in the best marketing methods for their produce.

History

The State Farmers Market was built by private enterprise and opened in 1955. It was purchased by the State of North Carolina in 1961, and the State Department of Agriculture was designated as the agency responsible for management and operating procedures.

The Market was built, based upon the needs for a centrally located facility, after a thorough study of conditions that had existed for many years. Prior to 1955, the fruit and vegetable wholesale dealers were scattered over Raleigh. As the population grew and traffic became more and more a problem, it was most difficult for the grocerymen and small wholesale firms within a radius of 150 miles of Raleigh to purchase needed supplies without considerable inconvenience and excessive waste of time.

The study also revealed the needs for a place where the small farmers could sell their produce, that is, the farmers who did not produce in sufficient volume to justify the expense of grading, sorting, and packing their produce to meet the requirements for long distance shipments. Housewives also expressed a real desire for a place where they could go and purchase farm fresh fruits and vegetables for immediate consumption and for canning and freezing.

II. FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: Lack of opportunity to expand land area and expand physical facilities. The entire present market facility is located in the Crabtree Creek Flood Plain, and due to the flood plain ordinance, the Market is unable to expand its present facilities to meet the increased demands for a larger facility. The adjoining land is also in the flood plain area and cannot be used for expansion of the facility. The Market was completely flooded twice during 1973, with the total estimated damage in excess of \$100,000.

The Market patronage continues to increase each year. More farmers sell on the Market and more housewives come to the Market each year to buy

farm fresh fruits and vegetables for immediate consumption, canning, and freezing. This is borne out by the fact that farmers are coming to the Market from areas approximately 150 miles from Raleigh, and the population area served by the Market has doubled in the past ten years.

In order to handle the increased patronage, new and larger wholesale units, retail sale facilities, truck farmer sheds, a restaurant facility, a fish market facility, parking area, etc. are desperately needed. A visit to the Market during the fresh produce season indicates the extent of the problems now encountered by the Market staff.

Response: Request that a study be made by USDA to determine the present and future needs of the Market as far as facilities are concerned and also to make suggestions for possible new site locations. This study will be made at no expense to the State.

III. PLAN FOR THE 1975-77 BIENNIUM

Statistical Data on the Market

a. DEALERS ON THE MARKET

| | |
|----|-----------------------------------|
| 13 | Fresh fruit and vegetable dealers |
| 1 | cash and carry wholesale grocery |
| 1 | nursery stock |
| 1 | fresh fruit and vegetable broker |
| 1 | restaurant |

b. RENTED SPACE ON MARKET

| | |
|----|---------------------------------------------------------------------|
| 36 | wholesale units 22 1/2" x 100" |
| 1 | 11,200 square foot metal building |
| 1 | Logan Trading Company building |
| 7 | farmers shed units |
| 1 | restaurant |
| 1 | garage (parking space rented to trucking firm at \$50 per month) |
| 6 | public toilets |
| 1 | brokerage company office |

c. PARKING SPACES

| | |
|-----|----------------------------|
| 85 | open spaces for sellers |
| 76 | covered spaces for sellers |
| 161 | total spaces for sellers |

d. SELLERS UTILIZING MARKET

More than 14,500 -- sellers per year sell on the Market with the heaviest volume being June through October

PATRONS UTILIZING MARKET

Over 100,000 patrons each year

e. DELIVERIES BY FARMERS

| | |
|------------------------------------|------------------|
| fruits (mainly apples and peaches) | 173,620 bushels |
| berries | 4,817 (12 Pints) |
| corn, dozen count | 88,380 |
| vegetables, bunched - dozens | 17,700 |
| vegetables, bushels | 127,765 |
| tomatoes, 50 lb. basis | 26,000 |
| potatoes, Irish, bushel basis | 8,825 |
| potatoes, sweet, bushel basis | 20,830 |
| pecans, pounds | 6,800 |
| cantaloupes, watermelons | 659,600 |
| pumpkins | 41,369 |

RECEIVED BY 12 WHOLESALERS

| | |
|-------|----------------------|
| 5,698 | Complete truck loads |
| 9,579 | Part truck loads |

NOTE: Large quantities are also received by railroad but we have no way to determine the volume. Also, no accurate way to determine the volume handled by wholesale truckers who operate seasonally and rent space by week or month.

Analysis of Major Changes Proposed

- a. Since the State Farmers Market is located in the Crabtree Flood Plain, it is impossible for us to make the necessary expansion of facilities to meet the needs of the increased patronage of the Market. It is our plan, during the 1975-77 biennium, to request USDA to make a study of present and future facility needs for the Market, as well as to make suggestions as to possible site locations in the area. The study will include type and number of facilities that will be required to meet the needs. When the study has been completed, the information will be submitted to the State Property and Construction Division for cost estimates which will be included in our future budget request.

There will be no cost for the study made by USDA.

MUSEUM OF NATURAL HISTORY PROGRAM (BUDGET PAGE F-40)I. PROGRAM DEFINITIONPurpose

To function as an educational institution and reservoir of knowledge and materials of and about our State's natural resources past and present.

Means and Methods Used to Achieve the Purpose

1. By maintaining permanent exhibits illustrating unique or interesting aspects of the flora and fauna of the State or designed to instruct visitors to the museum on various aspects of natural history which should be part of the intellectual background of an educated citizenry.
2. By maintaining a program of temporary exhibits which are periodically changed to illustrate certain events, to utilize new and unusual seasonal materials coming to the museum, and to utilize the full display potential of the permanent collections of the museum.
3. By maintaining a staff of taxonomic specialists who are prepared by background and experience to aid the scientific community in solving problems involving the identification and classification of the flora, fauna, and minerals of the State.
4. By maintaining a liason with the University community in order to:
 1. House collections when lack of space precludes the University housing them.
 2. To advise the graduate faculties on significant and timely research problems which offer an opportunity for graduate research.
 3. To inform University faculties and students on the facilities and programs of the museum that are available to them.

5. By developing an effective public relations program to keep the public informed on museum acquisitions, programs, and research activities.
6. By maintaining a liason with such groups as Garden Clubs, Boy Scouts, etc. to offer professional advice as these organizations develop earth and life science programs for the youth of our State.
7. By offering a lecture program particularly designed to give young, unknown naturalists an opportunity to present the results of their endeavors to an interested public.
8. Conduct an education program to serve the museum's stated purpose through the use of tours, lectures, conferences, workshops, the operation of a materials loan program, the development and distribution of appropriate written materials, the sponsorship and promotion of the N. C. Student Academy of Science, service rendered on a consultant basis to agencies and individuals having natural history interpretive program needs and problems.

History

1851. Chapter 106, Article 1. General Assembly authorized the Governor to appoint a State Geologist "to keep a cabinet (museum) or collection to illustrate the agricultural and other resources of natural history of the State."
1879. The North Carolina State Museum of Natural History placed under the supervision of the North Carolina Department of Agriculture.
1959. H.B. 966. Chapter 1280. An act to provide for the restoration of the Roy Hampton Museum now located at the base section at Morehead City and to provide for its preservation and display.
1961. H.B. 1027. Chapter 1180. An act to establish an Advisory Commission for the State Museum of Natural History.

The Advisory Commission is composed of the following members:

Director of the Museum of Natural History
 Commissioner of Agriculture
 State Geologist
 State Forester
 Director of the Institute of Fisheries
 Research of the University of North
 Carolina
 Director of the North Carolina Wildlife
 Resources Commission
 Superintendent of Public Instruction
 - "and at least three persons appointed
 by the Governor representing the East,
 Piedmont, and Western areas of the
 State."

. During the past ten years the Museum has sought through its education section to develop programs that would extend its services out into the schools and communities of the State needing these services but denied them because of the time and distance factors involved in traveling to the museum itself.

Statutory Authority

Chapter 106, Article 1

II.

FIVE-YEAR PLANNING PERSPECTIVE

- a. Problem: A new museum building is required to house the State's natural history collections properly. It is the responsibility of the North Carolina State Museum of Natural History to provide facilities for the preservation of collections of plants, animals, and minerals of the State and to maintain these collections in such a manner that they are readily available to all who need to use them. The present museum building is poorly designed to house these collections. In addition, there is inadequate space available to provide suitable work areas and office space to carry out the research, education, public relations, and exhibit programs necessary to educate the public on their natural heritage and to provide guidance on problems of environmental quality and ecological balance.

With space and money at a premium, the ability of individuals and colleges to maintain their collections has reached a critical stage. Many college museums have begun to drastically reduce their activities and put collections in storage, and many private collections have begun to deteriorate. In recent years, old collections of pressed plants and preserved animals have become especially valuable to scientists. As major changes occur in the environment, such as the spread of pollutants, it has become more and more difficult to find "unexposed" samples for comparison. Museums and private collections are often the only source of such samples. The collection of the North Carolina State Museum of Natural History, dating back to 1851, is one such invaluable source.

The museum should also be able to house specimens collected during periodic stream surveys by the biologists of the North Carolina Wildlife Resources Commission and those collected by scientists doing environmental impact studies for such public utilities as Carolina Power and Light Company and private industry such as Texas Gulf Sulfur. In addition, the museum should make intensive collections from areas that will be irretrievably changed; for example, when a large reservoir created by damming a river system will flood thousands of acres of bottomlands.

Not only is it necessary to house such collections; information concerning them must be readily available to scientists and other researchers. This is a formidable undertaking. For example, the insect collection of the North Carolina Department of Agriculture contains over 18,000 species and over three million individual insects. The herbarium of the University of North Carolina at Chapel Hill contains over 500,000 specimens exclusive of pollen slides and wood samples and slides. It is essential that data concerning these collections be stored in a computer complex. Such a computer system should be an integral part of the American Systematics Computer network which will link all major museums and research facilities into a functional unit so that North Carolina researchers will have information readily available on material in other museums and other museums will have access to data concerning the collections housed in the North Carolina State Museum.

With all the major natural history collections of the State housed in the central facility, these collections and the personnel associated with them would be readily available to researchers from other resource-based State agencies, such as the Wildlife Resources Commission, State Parks, Conservation and Development, and the Forest Service. Many branches of the Agriculture Department, such as the Research Stations, Agronomic Division, and Structural Pest Control Division would also find this close-knit organization of tremendous benefit since they would only have to visit one building for advice or consultation.

Facilities would be available for public lectures and high school and college classes would be able to come to the museum for various kinds of instruction. Space would be available for graduate students, visiting professors, adjunct professors and research associates to work with the collections. Computer terminals on every college campus could also tie into the computer, so that researchers on these campuses would have ready access to research data.

Response: Provide a Museum of Natural History Building to house the natural history collections of the State and to provide the auxiliary services essential to their maintenance, display, and curating. The museum should be organized around three Divisions; The Public Division should include display areas, auditorium, classrooms, sales rooms, lounges, cloak rooms, rest rooms, etc. The Operations Division should include offices and workrooms for administrative, curatorial, research, and education staffs. The Service Division is conceived with the functioning of the institution and should include work shops, storage, mechanical plant, kitchens, security, and building maintenance facilities, etc.

Square footage is approximate, subject to detailed planning but should provide facilities for the following:

Public, Operations, and Service Divisions to service the collections listed below - 125,000 sq/ft

The North Carolina State Museum of Natural History collections of invertebrates, vertebrates, and minerals - 100,000 sq/ft

The North Carolina State Herbarium (combining the herbaria of the University of North Carolina at Chapel Hill, North Carolina State University at Raleigh and Duke University at Durham) - 75,000 sq/ft

The North Carolina State Entomological Service (combining the entomological collections of the North Carolina Department of Agriculture, and the Entomology Department of North Carolina State University at Raleigh) - 75,000 sq/ft

In addition, a Computer Complex to store data on these collections in such a way that data retrieval and systems analysis can be carried on efficiently - 5,000 sq/ft

TOTAL 380,000 sq/ft

- b. Problem: The Roy Hampton Museum is housed in temporary quarters with a temporary staff. The Roy Hampton Museum is housed in temporary quarters in Beaufort, North Carolina without professional staff. On June 20, 1959, the Hampton Museum was transferred to the North Carolina State Museum of Natural History in Raleigh by virtue of the following action:

The General Assembly of North Carolina do enact: Section 1. The State Museum of Natural History is authorized to take possession of, restore and preserve said Museum and as soon as practicable after said restoration to place the same on exhibition and display at appropriate places in the State for the benefit of the public and other interested persons.

From 1959 until 1970, the Museum was housed in the Division of Commercial and Sports Fisheries office building at Morehead City. However, this

building was demolished by order of the Governor and Council of State and the Hampton Museum was placed in temporary quarters in two rooms of a vacant automobile showroom in Beaufort, North Carolina. These two rooms were to house the museum only until a new Commercial Fisheries building was completed. Although this building was completed March 6, 1973, no space was provided for the Hampton Museum.

Response: Provide a permanent facility to house the Roy Hampton Museum. This will provide a natural history museum which will serve coastal area schools, make the Raleigh educational program more effective and which will serve as a source of recreation and enjoyment to persons who visit the Morehead - Beaufort area.

- c. Problem: The Highlands Biological Laboratory Museum may become the responsibility of the North Carolina State Museum. The Highlands Biological Laboratory, Highlands, N. C. which has been supported by a consortium of colleges will become part of the University system of North Carolina. It has been proposed that the N. C. State Museum of Natural History assume responsibility for the museum at the Laboratory.

Response: Accept responsibility for preparing exhibits for the Highlands Museum. This museum will also allow the Raleigh Museum to extend its educational program into the mountain counties. It will expedite the flow of materials, such as sea life, from Hampton to Highlands and minerals and other mountain materials from Highlands to Hampton.

- d. Problem: Reorganization of the museum program is required for efficient operation. The museum program has been organized around an education branch and an exhibits branch. Modern museum management requires a much broader organization in order to carry out its goals.

Response: The museum will be reorganized into five areas of responsibility with equal attention devoted to each area. These divisions are Education, Exhibits, Collections, Research, and Publications. Although each of these divisions will have specific responsibilities, they will co-ordinate their efforts to achieve the museum's goals.

- e. Problem: The museum has not developed community support through a well-organized volunteer program. Currently the museum staff performs every function in the museum program without the service of volunteers from the Raleigh community. A volunteer program is the most effective way of developing community support for the museum's program.

Response: The museum will begin an intensive program to attract, train, and maintain an active volunteer program which may include such activities as follows:

1. The instituting of a Docents Program to train and utilize interested citizens as aides to the museum, particularly through such organizations as the Junior League, which requires annual civic service projects of its members.
2. We will develop programs to interest high school service clubs, such as the Key Club and the Lionettes, in helping the museum as their service project.
3. We will develop programs to organize, train, and utilize interested high school and college students as museum aides (patterned after the "candy-striper" program in many hospitals).
4. The museum will investigate various types of work-study programs to develop ways in which interested students can have an opportunity to explore museum work as a possible career.
5. We will develop cooperative programs between the museum and such groups as Boy Scouts and Camp-fire Girls to enlist their senior groups such as Sea Scouts and Horizon Club, in service programs with the museum.
6. The museum will work closely with the State Department of Education to work out programs enabling their Conservation and Resource-Use specialists to receive training in museum design and display techniques.

- f. Problem: The museum has not carried out a well-rounded and effective research program. The museum lacks an effective and well-coordinated program of scientific research. The museum, by its very nature, should be the strongest and most effective scientific institution in the State. Scientific institutions are judged on the basis of their research; the museum has done little in the way of research.

Response: All museum research efforts will be concentrated on making an analysis of natural history problem areas - past and present. If other State agencies are working in an area, the museum will coordinate its activities with those agencies to prevent a duplication of effort.

- g. Problem: The museum does not have a comprehensive publications program. The heart of scientific respectability and the major method by which the scientific community is kept informed is through publication of the results of scholarly research. The museum has done little in the way of publishing scientific material.

Response: Organize a Publications Division within the museum to encourage curators to prepare the results of their research for publication and to perform the editorial and technical aspects of publishing these results. The Publications Division will be responsible for the following types of publications:

1. Collected Papers Series, which publishes short papers and notes. These are of primary interest to other specialists in various fields.
2. A Monograph Series for major research findings, which are usually critically important to the citizens of the State but have limited applicability elsewhere. However, monographs containing valuable scientific information are often published by a State Museum even though the research was not done in that particular State if the information contained therein is useful to specialists in the State.
3. Books such as the classic "Birds of North Carolina" and "The Amphibians and Reptiles of North Carolina" which is now in preparation.

4. Educational materials for use in schools and as an aid to the public in identifying natural history material such as "Poisonous Snakes of the Eastern United States with First Aid Guide" and "Some North Carolina Fresh Water Fishes" now available from the museum.

- h. Problem: The museum collections have been restricted to North Carolina material. For some years it has been the policy of the museum to restrict its accessions essentially to material native to and collected within the boundaries of the State. This has drastically curtailed the ability of the curators to obtain comparative material for study. The preparation of teaching exhibits which widen the public's appreciation of the number of valuable collections of materials collected in other parts of the world is drastically curtailed by this restriction.

Response: We will begin to broaden our collections to include judiciously selected comparative material and materials that will be useful in the preparation of exhibits illustrating various biological phenomenon. We will co-ordinate our program with the N. C. Zoo authority to insure that valuable scientific material is saved and put to effective use and will begin a public relations effort to alert private collectors to the fact that the museum will accept valuable natural history material from any source.

- i. Problem: The present museum building should undergo extensive renovation. The atmosphere created by the building which the museum currently occupies is sterile and poorly designed. The museum facility does not create a climate which generates a feeling of love and respect for the State's natural beauty. It fails to create an impression that the museum is a place where our citizens and our visitors can experience a relaxed and enjoyable visit as a guest of the State.

Response: We will pay increased attention to building maintenance. By use of panels, lowering ceilings, paint, murals, and effective lighting, we will create different atmospheres in various areas. We will install comfort areas at various strategic places where museum visitors can relax for a few minutes.

- j. Problem: The museum exhibits are out-moded and poorly designed. The majority of the exhibits in the museum are obsolete. Most of the exhibits in the museum have become dirty and suffered marked deterioration over the years. Most of the display cases are out-moded and not designed for use with modern museum display techniques. Most exhibits are static and there has been little use made of dioramas or mini-exhibits to supplement the major exhibits.

Response: The museum will begin immediately on a long-range program to replace obsolete exhibits with modern exhibits designed according to the best principles of modern museum display and exhibit design. All of the cases in the museum must be replaced with modern hermetically sealed cases, except those that can be used effectively in areas emphasizing the historical aspects of the museum.

- k. Problem: The museum library is unusable in its present state. The museum library is poorly maintained and inadequately housed. The museum library is poorly equipped. It lacks study areas where visitors can use its holdings in a quiet, relaxed atmosphere which generates a feeling of respect for scholarly pursuits. A well-rounded library is essential to research, and it is imperative that it be well cataloged, which the current holdings are not.

Response: We will renovate the library and through the use of paneling, paint, and proper lighting make the atmosphere more attractive. We will also secure funds to equip the library with modern library furniture. We will expect the librarian to maintain an interlibrary loan system and/or secure xerox copies of pertinent publications desired by a museum specialist.

- l. Problem: The educational program of the museum cannot expand without additional staff and increased budget support. The current high interest level and need for the type of services and materials offered by the Museum's education program have placed such demands on this part of our program that our production limit has been reached with current staffing and materials. The increased use of the museum's visual material is an illustrative example. During the past ten years the loan of slides, movies, and filmstrips (N. C. subject matter usually not available from other sources) has increased from a

few dozen pieces per year to over 23,000 pieces during the 1973-74 fiscal year. The museum's "traveling exhibits" loan program was started with five exhibits in early 1968. Our current holdings are 199 exhibits which were loaned by the museum over 5,800 times during 1973-74 fiscal year. Currently these exhibits are only of birds and mammals, but the need is great for other types of material within the program. The primary users of these materials are the schools of the State and the museum is the only source for this type of material. Another problem area within the museum's education program is the unexpected growth rate of the N. C. Student Academy of Science--which the museum jointly sponsors with the N. C. Academy of Science. The museum granted the first Student Academy Charter in May 1973. At the closing of the school term in 1974 the Student Academy numbered 89 chapters with a membership of over 3,500 students representing 50 of the 100 counties in our State.

In 1973 the museum sponsored its first extension course (Spring Flowers) in cooperation with the N. C. Botanical Gardens. Enrollment was limited and over-subscribed almost immediately. In 1974 the museum and the Botanical Gardens co-sponsored four extension courses--two Spring Flower courses, Birds, and Winter Botany. All courses filled up, and there is a current waiting list of subscribers for future courses. The current museum education program is staffed with three curators and a secretary. As the program has developed, it has been necessary to have curators perform all work functions associated with the program except minor clerical ones and exhibit preparation. At the current level of operation this practice constitutes inefficient use of professional personnel.

Response: If the museum is to adequately respond to the increased requests for the services and materials offered by its education program during the next five years more staff, space, and materials will be needed. As the staff increases, the organization pattern will be changed through more well defined work assignments to secure maximum use of each staff member.

III. PLAN FOR THE 1975-77 BIENNIIUM

Indicators of Expected Accomplishments

| | 1973-74 | 1974-75 | 1975-76 | 1976-77 |
|--------------------------------------------------|---------|---------|---------|---------|
| A. Attendance in Museum | 220,000 | 230,000 | 240,000 | 250,000 |
| B. Attendance Away From Museum (Group Programs) | 6,500 | 8,000 | 15,000 | 25,000 |
| C. Audio-Visual Materials Loaned No. of Pieces | 28,000 | 32,000 | 42,000 | 50,000 |
| D. New Exhibits | 16 | 40 | 60 | 100 |
| E. Catalog entries in Research Collection | 6,000 | 7,000 | 9,000 | 10,000 |
| F. Filmstrips (loaned) | 1,104 | 1,300 | 1,500 | 1,600 |
| G. Movies (loaned) | 179 | 200 | 225 | 250 |
| H. 2x2 Slides (loaned) | 21,600 | 24,000 | 25,000 | 25,000 |
| I. Traveling Exhibits (loaned) | 5,000 | 5,847 | 6,000 | 6,500 |
| J. Education Services In Museum (Group Programs) | 105 | 150 | 200 | 250 |

| | | | | |
|-------------------------------------------------------------|-----|-------|-------|-------|
| K. Education Services Off . Premises (Group Programs) | 143 | 150 | 175 | 200 |
| L. Extension Courses | 4 | 6 | 8 | 10 |
| M. Study Tours (Short Term Extension Courses) | 0 | 2 | 4 | 6 |
| N. N. C. Student Academy of Science (Student Membership) | 656 | 3,500 | 4,000 | 4,500 |

Analysis of Major Changes Proposed

The changes proposed have a number of objectives. Reorganization into five divisions is primarily designed to increase the efficiency of the staff. Other changes are designed to make the present facility as useful and attractive as possible while the museum still occupies it. The major changes involved revolve around the request for a new building. If we wait until a new building is completed before programs are begun and equipment ordered or built to fit into it, it would probably take an additional four or five years beyond the four-five year construction projection before the new museum would function properly.

a. New Museum Building

All the major collections of plants and animals in the State need adequate housing in order that proper curating can be accomplished and the collections can be made available for proper study

Approximate Cost

| | |
|-------------------------|---------------------|
| 380,000 ft. at \$50/ft. | \$19,000,000 |
| Equipment-Museum of | |
| Natural History only | 250,000 |
| | <u>\$19,250,000</u> |

Programs affected are covered in the discussion of the new museum building. The alternatives are to stay in the present structure without the program; the program without the building obviously cannot function with maximum efficiency in giving service to the State.

b. Roy Hampton Museum

The N. C. State Museum is responsible for the operation of the Hampton Museum by an act of the General Assembly. It is housed in temporary quarters and staffed by temporary employees who have no museum training. In its present facility and without a professional staff, it cannot serve the schools and the people of the coastal area properly, or serve a valuable public relations function in displaying North Carolina's natural heritage to out-of-state visitors.

With proper facilities and staff, the Hampton Museum could function properly as a branch of the N. C. State Museum allowing the N. C. State Museum to expand its educational and exhibits programs to the coastal region.

The Hampton Museum should have the following staff:

| | | |
|---------|---------------------|-----------------|
| 1976-76 | 1 Curator I | \$10,666 |
| | 1 Museum Technician | 10,200 |
| | | <u>\$20,866</u> |

| | |
|--------------------------------------|--------------|
| Supplies, maintenance and repairs | \$25,000/yr. |
|--------------------------------------|--------------|

The Hampton Museum should be housed in a properly designed and equipped museum building. \$500,000

If the Hampton Museum is built (or moves into better facilities), the following additional staff will be required:

- 1 Curator II
- 1 Museum Technician
- 1 Clerk-Typist
- 1 Janitor/Messenger

There are three alternatives: (1) Close it--this would require an act of the General Assembly; (2) Maintain it essentially as it is--the salary for the Hampton Museum employees now comes from the budget for temporary help and its expendable supplies are furnished by the N. C. State Museum in Raleigh. Without an increase in budget and because of the distance involved, the Raleigh Museum cannot carry out its responsibilities to the General Assembly, which charged the Museum to "take possession of, restore, and preserve said museum". The Hampton Museum cannot function in its present state as a viable branch of the N. C. State Museum giving service to the people of the Coastal area.

c. Highland Museum

The University system has no personnel who are trained to carry out an exhibit and education program designed around modern museum techniques.

The Highlands Biological Laboratory would operate more efficiently with a well-curated museum available to students, staff, and visiting scientists who come there from all over the world to do research on the flora and fauna of the N. C. mountain region. The N. C. State Museum program would benefit by extending its services to the schools and the public of the tier of mountain counties where people have a difficult time coming to Raleigh to visit the N.C. State Museum.

The University should bear responsibility for the maintenance, repair, and expansion of the museum building, the janitorial service and supplies and materials necessary for the housekeeping function of the facility.

If the North Carolina State Museum must furnish the above services and supplies, the following budget would be required:

| | |
|--------------------------------------------------|-------------|
| Expendable supplies, maintenance, and repairs | \$25,000/yr |
|--------------------------------------------------|-------------|

The Highlands Museum should have the following staff to carry out its function as a branch of the North Carolina State Museum:

- 1 Curator II
- 1 Curator I
- 2 Museum Technicians
- 1 Clerk-Typist
- 1 Janitor/Messenger (if the museum
assumes full
responsibility.)

The alternative is to refuse to accept responsibility for the Highland Museum, thus passing on the cost to the University system which is not prepared to operate it efficiently. It would also deprive the mountain region of the unique educational and exhibit programs which the State Museum can provide.

d. Reorganization of the Museum Program

The museum cannot carry out its goals while organized only around an education division and an exhibits division.

A coordinated program between five divisions-- Education, Exhibits, Collections, Research, and Public Relations--would allow the museum staff to provide more efficient service to other State agencies, the school system, and the general public. Currently the museum has only one Curator III, the Director of Research and Curator of Collections, whose salary is \$14,052. This curatorship should be divided and a Curator III position established for each museum division.

This would require the following staff additions:

| | | |
|---------|-------------------------|---------------|
| 1975-76 | Curator III - Exhibits | \$16,149 |
| | Curator III - Education | <u>16,149</u> |
| | | \$32,298 |

| | |
|---------------------------------------------|------------|
| Supplies and materials for this program: | 20,000/yr. |
|---------------------------------------------|------------|

Additional curators for collections and publications will be required as soon as the new building can be completed.

The only alternative is to divide the responsibility of supervising these divisions among the current curators who would not be able to give their full attention to the development of these divisions.

e. Collections

The natural history collections of the NCSM are not adequately curated so that they can properly support the Research, Education, and Exhibit Divisions of the museum.

Expansion of the collections of plants, animals, and minerals would allow the Research Division to provide other State Agencies and the scientific community with more accurate data on which decisions, i.e. environmental impact statements, are made; it would allow the Education Division to expand its services to teachers, school children, and the general public by having more and better visual and touch-and-feel media available, and it would allow the Exhibits Division to produce temporary and permanent exhibits to teach basic principles and to introduce museum visitors to the vast resources of our State by showing them the best possible examples of natural materials housed in attractive settings designed to enhance the visual appeal of the exhibit.

The Curator of Lower Vertebrates is responsible for reptiles, amphibians, and fish. This is the only area with a Curator I, who is a herpetologist. Another Curator I - Ichthyologist is required here.

1976-77 1 Curator I - Lower Vertebrates

None of the other areas, Ornithology, Mammalogy, Invertebrates, or Geology have a Curator I position under them. Proper curating of these departments requires:

| | | |
|---------|------------------------------|----------|
| 1975-76 | 4 Curator I positions - | |
| | 1 curator in each department | |
| | @ \$10,666 | \$42,664 |

The Museum is responsible for plants as well as animals and minerals. We have no curator in botany. Two botanists, one a population ecologist and the other a community ecologist are needed to carry out detailed studies on the role of plants in the ecosystem and to aid in the preparation of educational materials and exhibits on plants.

1976-77 1 Curator II - Botany
 1 Curator I - Botany

These curators, under the direction of the Director of Research are required to analyze data, prepare reports, and publish on their research. The following positions should be established to support the curatorial functions of the museum:

| | | |
|---------|------------------------|------------------|
| 1975-76 | 1 Stenographer I | \$ 8,129 |
| | Supplies and materials | |
| | | <u>30,000/yr</u> |
| | | \$38,129 |

1976-77 2 Clerk-Typists
 3 Museum Technicians

Properly curated and researched collections are the only source of data on which to base decisions concerning the wise use of our natural resources. This information would be available to all State agencies and the general public and would result in more efficient planning and decision making on the part of these groups.

The structure presented is necessary for the most efficient functioning of a first-class museum whose area covers an entire state and serves such a broad clientele. A lesser structure simply means that the museum cannot function in the most efficient manner, thus depriving the people of the State of the full value of its services.

f. Inadequacy of Present Building

Even if the legislature decides to fund a new museum building, it will be at least four years before such a building would be completed. It is essential that the current building be renovated in order to provide adequate work areas for the staff, to carry out an effective education program in the building, and to enhance the new exhibits being planned.

The museum staff will be able to perform their duties more efficiently, community service programs, such as workshops for teachers, can be offered, and the public will be able to enjoy the exhibits in a pleasing atmosphere.

The open mezzanine areas now housing fishes and whales should be floored, creating spaces which could be partitioned into classrooms, offices, and work areas.

Cost: \$50,000

All areas of the existing building should be re-decorated using wall panels and partitions to break up the long vistas, which currently give the museum an "institutional" appearance.

Cost: \$20,000

If the mezzanine areas were floored, the museum area would be ready for immediate occupancy by the Department of Agriculture when the museum moves into a new building. This would require the expenditure of capital funds by the Department of Administration.

The only alternative is to leave the building in its present state, thus depriving the staff of well designed work facilities and the public of a pleasing atmosphere which would be a credit to the State.

g. Exhibits

Almost every exhibit case in the museum is outmoded. None can be sealed so that insects and dust cannot enter. While some of the exhibits in these cases are of historical significance, most of the specimens and all back-grounds and other case accessories need to be replaced. Design and construction of permanent exhibits often takes a year or more, and it is imperative that this program begin immediately so new exhibits will be ready for the new museum. New modern cases which can be kept dust and insect free will slow the deterioration of the exhibits. The public will have a more pleasurable experience while viewing fresh, clean specimens in attractive cases with backgrounds depicting a habitat characteristic of the animals exhibited.

Estimated Cost: 1975-76

| | |
|-------------------------------|-----------|
| 150 new exhibit cases @ \$750 | \$112,500 |
| 20 Lane storage cases @ \$300 | 6,000 |

Material for construction of
large permanent exhibits for
new building

| |
|-----------------|
| 50,000 |
| <hr/> \$168,500 |

New Exhibit cases and exhibits will greatly enhance the Educational Division programs.

The alternatives are to leave the exhibits basically like they are in the same cases or to partially fund the exhibit program. In either case, the appearance of the museum will not be good and the public will receive less than an exposure to a first-class museum.

h. Library

The museum library is important to the efficient operation of all divisions in the museum, but vital to the Research and Education Divisions. The museum library is inadequately housed, the furnishings are makeshift, large runs of serials and other scientific publications are not bound, and we do not have a library staff.

A properly housed library with its associated card catalogs under the direction of a trained library staff supports all divisions of the museum by furnishing needed information accurately and quickly, thus saving the museum staff a tremendous amount of time. Trained librarians also know what is going on in the museum and screen the literature so as to bring pertinent materials to the attention of the appropriate Division head.

Efficient library function requires:

| | | |
|---------|----------------|-----------------|
| 1975-76 | 1 Librarian II | \$10,925 |
| | 1 Clerk-Typist | 6,482 |
| | Supplies and | |
| | Materials | 25,000 |
| | | <u>\$42,407</u> |

The current backlog of professional journals, periodicals, and reprints requires rebinding.

\$10,000

The museum library receives scientific publications from a wide range of sources: subscriptions, exchanges, bequests, and gifts. It thus acquires materials not usually available in other State agencies. If the library facilities were properly maintained, other State agencies, students, and the public would find it an invaluable source of reference data.

If we maintain our present operating procedure, library materials will continue to accumulate, unbound and uncataloged. In such condition, it is of little value to anyone.

i. Education Program

Major staff additions will need to be made in the Museum Education program to be able to respond to the increasing request for its services. At least four new staff positions will be needed, two curators (professional naturalist-educators), an audio visual clerk and a clerk-typist. These additions to the education staff will enable this part of the total museum program to function more efficiently in meeting the ever increasing demands for its services. The costs at current salary levels would be:

| | | |
|---------|----------------------|-----------------|
| 1975-76 | 1 Curator I | \$10,666 |
| | 1 Clerk-Typist | 6,482 |
| | 1 Audio-Visual Clerk | 8,129 |
| | | <u>\$25,277</u> |
| | Supplies and | |
| | Materials | \$35,000/yr. |

Additional cost would be incurred in other areas of the total museum budget because of the supportive demands these positions would place upon other sections of the total museum program. The only alternative solution to these proposed program changes is to deny the services of the program to the citizens or schools requesting them.

DISTRIBUTION OF U.S.D.A. DONATED FOODS PROGRAM (BUDGET PAGE F-42)I. PROGRAM DEFINITIONPurpose

To expand markets and other outlets for farm products, especially those acquired by the U. S. Department of Agriculture under farm price support programs and to improve the health and nutrition of the people of the state through providing food supplies to more adequately meet their nutritional needs.

Means and Methods Used to Achieve the Purpose

1. Determine needs and request U.S.D.A. donated foods from Federal Government specifying the time and place of deliveries.
2. Provide warehousing, transportation, distribution, and accounting for all U.S.D.A donated foods received. Foods are made available to the state at no cost; however, it is the state's responsibility to provide for storage, intrastate transportation and distribution, including full accountability for all foods received.
3. Distribute U.S.D.A. donated foods to non-profit school lunchrooms, state hospitals, nutrition programs for elderly, correctional facilities, non-profit institutions, child care centers, summer camps for children, supplemental food for mothers and preschool children, and disaster relief.
4. Establish policies and procedures for cooperating state and local agencies to follow in food distribution and direct supervision of the entire program through our field representative staff.

Administrative Structure

The program is operated under a cooperative agreement between the U. S. Department of Agriculture and the North Carolina Department of Agriculture. State policies and procedures must comply with the overall federal laws, regulations, and policies. The participating

recipient agencies (schools, institutions, and so forth) are parties to cooperative agreements with the North Carolina Department of Agriculture under which they agree to be bound by the regulations, policies, and procedures as established by the North Carolina Department of Agriculture.

The department utilizes leased warehouse facilities at Butner and Salisbury. The Butner warehouse consists of approximately 36,000 square feet of dry storage and 4,000 square feet of refrigerated space. The Salisbury warehouse includes 35,000 square feet of dry storage and 5,000 square feet of refrigerated space. Foods are received at the warehouses in freight carload lots where they are stored for subsequent shipment to schools and institutions on a monthly or bimonthly basis. Tractor-trailer trucks operated by the department deliver the food to the recipient agencies where it is utilized in the food service programs of the schools and institutions.

History

The Food Distribution Program began in the early 1930's and was operated by various state and federal authorities in its early years. The North Carolina Department of Agriculture first became involved in the administration of the program in 1944 at the direction of the Governor and mutual agreement of the Superintendent of the State Department of Public Instruction and the Commissioner of Agriculture. The Department of Agriculture operates the Food Distribution Program in cooperation with the U. S. Department of Agriculture. At the direction of the Governor, the department began distribution of food to needy families in 1961. This part of the Food Distribution Program is being terminated June 30, 1974, as the Federal Government has determined that the food stamps will replace the Food Distribution Program for needy families. The distribution of food to eligible schools, charitable institutions, camps, and child development centers will continue.

Statutory Authority

G. S. 143-64.5 authorizes and empowers the North Carolina Department of Agriculture to distribute food and agricultural products under contract with the Federal Government and to adopt rules and regulations and standards for the proper distribution of such food and agricultural products.

II.

FIVE-YEAR PLANNING PERSPECTIVE

Problem: Uncertainties and changes in Food Distribution Program at federal level. Since the Food Distribution Program is essentially a federal program operated by a state agency, the direction and thrust of the program is necessarily determined by federal legislation, regulations, and policies. State planning can take place only within the constraints of such requirements. The program has undergone a series of changes since its inception in 1935. Changes in economic and agricultural policies must be reflected in program changes to meet the changing conditions. Within the last ten years a great deal of emphasis has been placed on the distribution of food to needy families. During the last three or four years, the Food Stamp Program has developed as an alternative to distribution of food to families with counties gradually shifting from the Food Distribution Program to the Food Stamp Program. In July 1974, distribution of food to needy families was limited to a few counties in the state where the Health Departments were distributing food to mothers and infants under the special supplemental food program. Cherokee Indian Reservation was also continuing to distribute food to needy families.

While the U. S. Department of Agriculture had adopted the policy of phasing out the distribution of donated foods to all recipients, with the final termination date being June 1975, the U. S. Congress has enacted legislation reversing this policy. The Food Distribution Program has now been extended by law for a minimum of three years except for the needy family phase.

THEORY OF THE EARTH

1. The earth is a sphere, and its surface is covered by water. The land is divided into continents and islands. The water is divided into oceans and seas. The atmosphere is the layer of gas that surrounds the earth. The lithosphere is the solid part of the earth's surface. The hydrosphere is the water part of the earth. The biosphere is the living part of the earth.

THEORY OF THE EARTH

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2. The earth is a sphere, and its surface is covered by water. The land is divided into continents and islands. The water is divided into oceans and seas. The atmosphere is the layer of gas that surrounds the earth. The lithosphere is the solid part of the earth's surface. The hydrosphere is the water part of the earth. The biosphere is the living part of the earth.

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Response: The state should continue to operate at the present level as this appears to meet the needs and objectives of the program as envisioned by the Food Distribution Program and the U. S. Department of Agriculture. Developments in recent weeks have seen an increase in price support and surplus removal purchases by the U. S. Department of Agriculture. Large quantities of beef, pork, turkeys, and dry milk are presently being purchased and allocated to the states for distribution to the eligible agencies. This new federal legislation has also increased the budgeted funds for the program by upping the seven cents per meal served to ten cents per meal served. This indicates the strong intention of the Congress to continue to maintain and increase the food distribution through the program, particularly to schools and child development centers.

- b. Problem: Inadequate and expensive warehousing provided by the state for U. S. Department of Agriculture foods. The food distribution warehouse facility located at Butner is totally inadequate and unsuitable for food storage. Our facility at Salisbury is maintained under a 10 year lease agreement costing \$37,039 per year. If the state continues to pay the annual rental fee each year for a period of 10 years, the total rental fees would exceed the present purchase price. The lease agreement provides for state purchase of the facility any time between the third and seventh year of the lease.

Response: The state should seek to build a new food storage warehouse at Butner and should purchase the existing Salisbury Warehouse immediately.

III.

PLAN FOR THE 1975-77 BIENNium

Indicators of Expected Accomplishments

| Recipient Groups | Quantity and Value of U.S.D.A. Donated Foods | | | | | | | |
|----------------------------|----------------------------------------------|--------------|------------------|--------------|------------------|--------------|------------------|--------------|
| | 1973-74 | | 1974-75 | | 1975-76 | | 1976-77 | |
| | Quantity lbs. | Value | Quantity lbs. | Value | Quantity lbs. | Value | Quantity lbs. | Value |
| Schools | 35,598,260 | \$14,490,404 | 40,000,000 | \$16,000,000 | 40,000,000 | \$17,000,000 | 40,000,000 | \$18,000,000 |
| Charitable Institutions | 2,219,234 | 539,096 | 2,000,000 | 500,000 | 2,000,000 | 550,000 | 2,000,000 | 600,000 |
| Summer Camps | 118,700 | 46,186 | 120,000 | 50,000 | 120,000 | 55,000 | 120,000 | 60,000 |
| Needy Families | 18,069,242 | 9,821,831 | 1,500,000 | 700,000 | - | - | - | - |
| TOTALS | 56,005,436 | \$24,897,517 | 43,620,000 | \$17,250,000 | 42,120,000 | \$17,605,000 | 42,120,000 | \$18,660,000 |

Analysis of Major Changes Proposeda. Warehousing of U.S.D.A. Donated Foods

The state warehouse located at Butner, used for the storage of donated foods, is very inadequate. It was originally constructed in 1942 for use by the Army and had a life expectancy of five years. The building is wooden, including the floor, with no insulation, which makes it unsuitable for food storage. There is an extreme heat buildup during the summer months, and due to the type construction, there are many cracks in the floor and walls which allow dirt and insects to enter the building freely.

The warehouse which the Department leases at Salisbury for the storage of donated foods is an excellent facility constructed in 1972-73. The annual rental fee is \$37,037. Eighty thousand cubic feet of refrigerated storage was constructed in the Salisbury warehouse by the state using a federal grant in the amount of \$101,000. The federal and state government retain ownership of the materials and equipment used in the construction of the cold storage area of the warehouse. The lease agreement contains a purchase option permitting the state to purchase the warehouse at the appraised value between the third and seventh year of the ten year lease. If the state continues to pay the annual rental during the period of the ten year lease, the total rental fees would exceed the price at which the warehouse could probably be purchased. Thus, the state would more than pay for the warehouse in rental and still not own the facility at the expiration of the lease.

To provide an adequate storage facility to replace the present Butner warehouse will require a state appropriation of approximately \$750,000. The facility would include both 40,000 square feet of cool-dry storage area and 10,000 square feet of refrigerated storage area. The state already owns adequate land and rail siding at Butner which is available for the building location.

The Salisbury warehouse is available for purchase under terms of the option included in the lease agreement. Since the state and federal government already own the cold storage materials and equipment, their value would not be included in the purchase price, and an appropriation of \$350,000 probably would cover the present appraised value.

The purchase of the Salisbury warehouse and the construction of a new Butner warehouse would enable the state to provide adequate storage for the foods expected to be received and distributed to recipient agencies in the state. The alternatives are for the state to continue to pay the annual rental for the Salisbury warehouse and to continue to use the unsatisfactory warehouse at Butner with its attendant problems of heat, dirt, and insect infestation.

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